The University Of Queensland
AUSTRALIA
CREATE CHANGE

Institute for
Social Science Research

The Student Equity in Higher Education Evaluation Framework

Final Report

19 November 2021

Authors	Mark Robinson, Wojtek Tomaszewski, Matthias Kubler, Melissa Johnstone, Denise Clague, Tomasz Zajac, Jenny Povey, Caroline Salom
Acknowledgements	The project, *'Student Equity in Higher Education Evaluation Framework*, was commissioned by the Australian Department of Education, Skills and Employment, and funded by the National Priorities Pool Program. The authors would like to thank the Department for providing feedback on preliminary outputs. Thank you to our Expert Advisory team and stakeholders who participated in consultations and provided input into this project (see Appendix A). In particular, thank you to Geoffrey Mitchell from the Queensland Widening Participation Consortium for his ongoing feedback and input. Thank you to Matt McDermott, Heidi Minchin, Xenia Aitken-Smith for their assistance in preparing this report.
Prepared for	The Australian Department of Education, Skills and Employment (project funded from the National Priority Pool under the Higher Education Participation and Partnerships Program).
Prepared by	Institute for Social Science Research The University of Queensland 80 Meiers Rd Indooroopilly Qld 4068 Australia Phone +61 7 3346 7471 Email: issr@uq.edu.au
Date Prepared	November 2021
ISSR Project Number	ISSR194942

Contents

Tables

Figures

Executive Summary

Background

The Higher Education Participation and Partnerships Program (HEPPP) provides funds to Table A only or eligible universities to undertake strategies that improve access to undergraduate courses for people from low socio-economic status (low SES) backgrounds, those from regional and remote areas, and Aboriginal and/or Torres Strait Islander peoples (DESE, 2021). An evaluation of the HEPPP in 2017 concluded that while it had demonstrated effectiveness in improving certain outcomes, there was a lack of consistent, rigorous and systematic data collection across HEPPP-funded projects. It was recommended that a Student Equity in Higher Education Evaluation Framework (SEHEEF or the Evaluation Framework) be developed to measure and monitor the impact of HEPPP-funded projects, and to inform future strategies. There was strong support within universities for a framework.

In March 2021, as part of the National Priorities Pool Program funding, the Australian Government's Department of Education, Skills and Employment (DESE or the Department) engaged the Institute for Social Science Research (ISSR) at the University of Queensland (UQ) to design an Evaluation Framework.

Due to the timing of this report, the terminology in this report refers to *HEPPP-funded projects, programs, or activities.* As mentioned throughout, the SEHEEF is designed to be flexible to accommodate future sources of Commonwealth funding, such as the Indigenous, Regional and Low SES Attainment Fund (IRLSAF)[1].

Purpose and Benefits

The purpose of this project is to develop a robust framework for the evaluation of the overall HEPPP and of individual HEPPP-funded university programs and activities. Specifically, as stated in the project brief, the aim is to produce an Evaluation Framework, developed in consultation with the Higher Education (HE) sector, that would structure and guide three levels of evaluation:

- Overall national program evaluation of the HEPPP and its outcomes.
- Quality improvement evaluations of HEPPP-funded university projects.
- Evaluations of the effectiveness and impact of HEPPP-funded university projects.

A well-designed SEHEEF has the potential to:

- Improve the level of consistency in how the evaluation of HEPPP-funded projects is understood, described, and implemented within and across universities.
- Streamline the workload involved in reporting on HEPPP outcomes, and in designing an effective evaluation.
- Maximise the usefulness of data collected by equity program practitioners, including the recording of student and staff observations and experiences.
- Embed evaluative thinking within the sector, highlighting the critical role of program staff in collecting data and recording their observations and experiences.
- Link the collection of data at the activity level with other evaluation components at the university and national level.
- Support the use of in-depth impact evaluation to strengthen understanding of what works, for whom, in what circumstances, how and why.
- Catalyse processes to enable better sharing of knowledge across the HE sector.

[1] .This report also sometimes refers to *Commonwealth-funded equity projects*,

- Enable a detailed understanding of the reach and impact of HEPPP funding on equity outcomes at the national level.
- To support building an evidence base to inform and improve equity policies and practice, and to deliver better HE outcomes for people from disadvantaged backgrounds.

Developing the SEHEEF

Drawing on past literature and stakeholder expertise

The development of the SEHEEF has been informed by evidence and insights obtained through a range of activities, including:

- A structured, rapid review of literature related to equity interventions in HE, as well as an analysis of HEPPP Access and Participation Plans and a sample of annual reports.
- Three 2-hour workshops with 61 members of the wider Australian HE sector to provide input on the foundational components of the Evaluation Framework. This included those from peak bodies representing equity practitioners (e.g., Equity Practitioners in Higher Education Australasia (EPHEA)) and universities (e.g., Universities Australia), as well as those from the National Centre for Student Equity in Higher Education (NCSEHE).
- Ongoing engagement and consultation with the Queensland Widening Participation Consortium (QWPC).
- Consultations with the team scoping the Widening Participation Longitudinal Study (as a cognate project commissioned by the Department), members of the project's Expert Advisory Group, and numerous key informants with specific expertise.
- An audit of relevant datasets in Australia to determine how existing data sources could be used to evaluate HEPPP-funded projects and to identify data gaps.
- A data linkage review to identify meaningful data linkages between existing data collections that would allow better evaluation of the impact of HEPPP overall and HEPPP-funded projects.
- 18 in-depth consultations with 25 data experts and custodians from 13 organisations to probe specific issues around data content and quality, ongoing and planned data integration projects, and privacy and ethics considerations.
- Socialisation of a preliminary Evaluation Framework with the sector through an online pre-recorded webinar, with accompanying online survey and drop-in sessions to gain sector input into the final design.

The scope and design of the SEHEEF has been underpinned by the following a set of principles: credible, implementable, flexible, useful, transparent, and inclusive and culturally appropriate. These principles can guide the implementation phase of the SEHEEF and provide a basis for decision making for universities and the Department when planning, managing, and conducting evaluation activities, and when reporting and disseminating findings.

The Foundations of the SEHEEF

Robust evaluation frameworks are built on strong foundations. For the SEHEEF, the key foundations included: a categorisation of student life stages; a distinction between HEPPP-funded programs and HEPPP-funded activities; a typology of HEPPP-funded activities; a Student Pathway Map; and a HEPPP Program Logic. These important foundations give structure to the SEHEEF, helping to inform tools, and provide clear and consistent concepts, definitions, and guidance for those involved in the implementation and evaluation of HE equity programs. More information is provided below.

Categorisation of student life stages

For the purpose of the SEHEEF, the Critical Interventions Framework model (Bennett et al., 2015; Naylor et al., 2013) of the student life course is used. It is widely familiar and accepted within the HE sector. The model is based on the delivery point of interventions (HEPPP-funded projects), enabling an extension of a program logic to include outcomes, which often accrue or can only be measured at later stages.

HEPPP-funded programs and HEPPP-funded activities

HEPPP funding is often utilised for equity programs that contain various activities (e.g., a program that contains university experiences, mentoring, and the provision of financial or non-financial resources). Programs can bundle activities in various ways, over various timeframes, and involve activities delivered at different stages of the student life course. For the purpose of the SEHEEF, the following definitions are used:

- **Activity**: An individual component of work funded (wholly or partially) by HEPPP (or through other relevant Commonwealth funding)[2] that either stands by itself or is a part of a program made up with other activities.
- **Program**: A set of activities managed together over a sustained period of time (wholly or partially) by HEPPP (or through other relevant Commonwealth funding).

Typology of HEPPP-funded activities

A typology of activities has been developed for SEHEEF. Unlike a program, an activity is an appropriate unit of measurement in the context of developing an evaluation framework as it can be understood and applied consistently within and between universities. This is important as it allows the routine aggregation of data on the number, reach, and characteristics of HEPPP-funded actvities at the sector level. Furthermore, a clear categorisation of activities enables linkage to expected outcomes which is important for continuous quality improvement and evaluation purposes.

The typology includes four activity types:

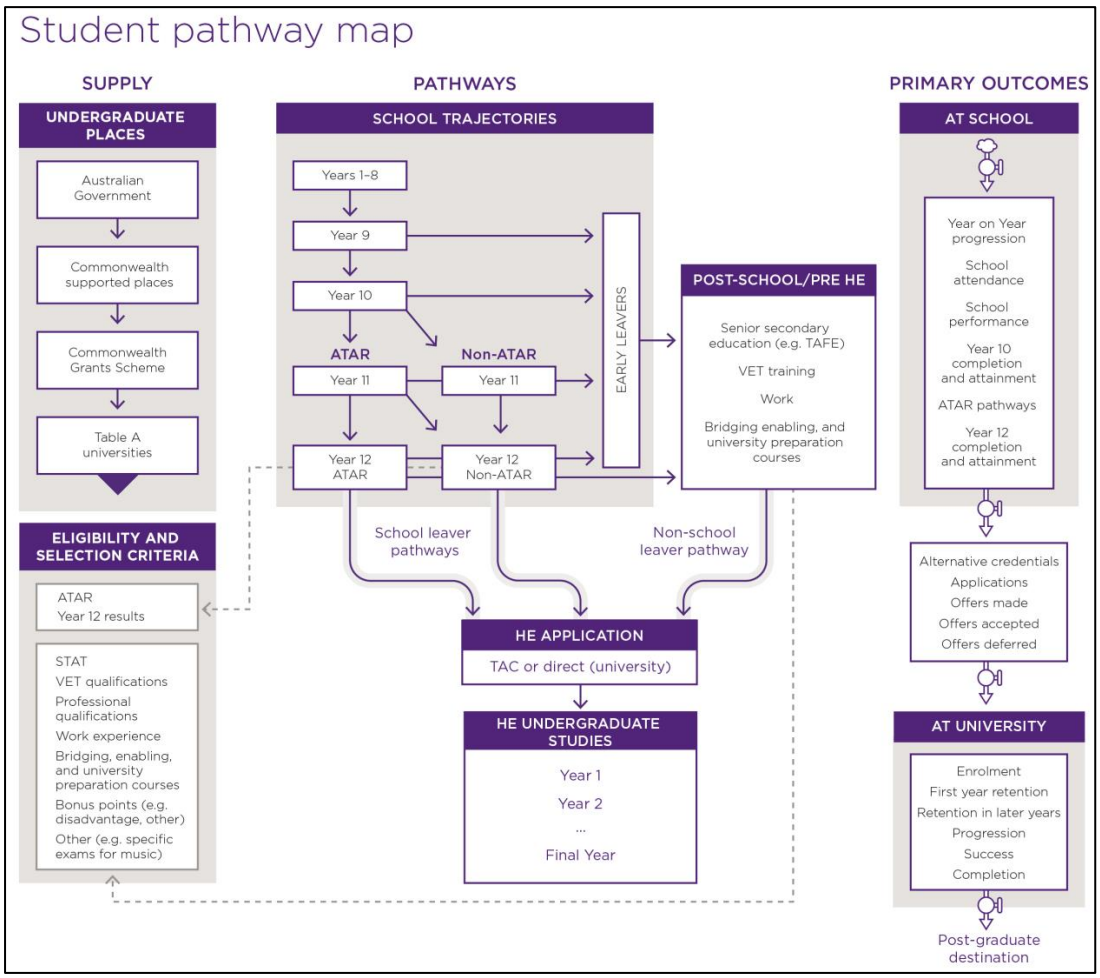
Student Pathway Map

A Student Pathway Map (Figure 1) was developed for SEHEEF, informed by a System Map previously developed by Enzyme Consulting Group for DESE (see Figure 17 on page 164). The Student Pathway Map aligns various points on the student journey with a set of key outcomes of interest for SEHEEF, which reflect important milestones for achieving successful HE studies (in terms of educational progression, attainment, and graduate destinations) or are precursors of successful HE studies situated in the education system (school attendance, performance, retention). These

[2] Due to the timing of the preparation of this report, the terms *HEPPP-funded* and *HEPPP-funding* are frequently used. However, the SEHEEF and the components of SEHEEF are designed to be flexible to accommodate other (and potentially new) sources of Commonwealth funding for equity projects.

outcomes have been well institutionalised in administrative data collections and are considered as 'primary' outcomes for indicating the impact of HEPPP by the Australian Government.

Figure 1. The Student Pathway Map for the SEHEEF.



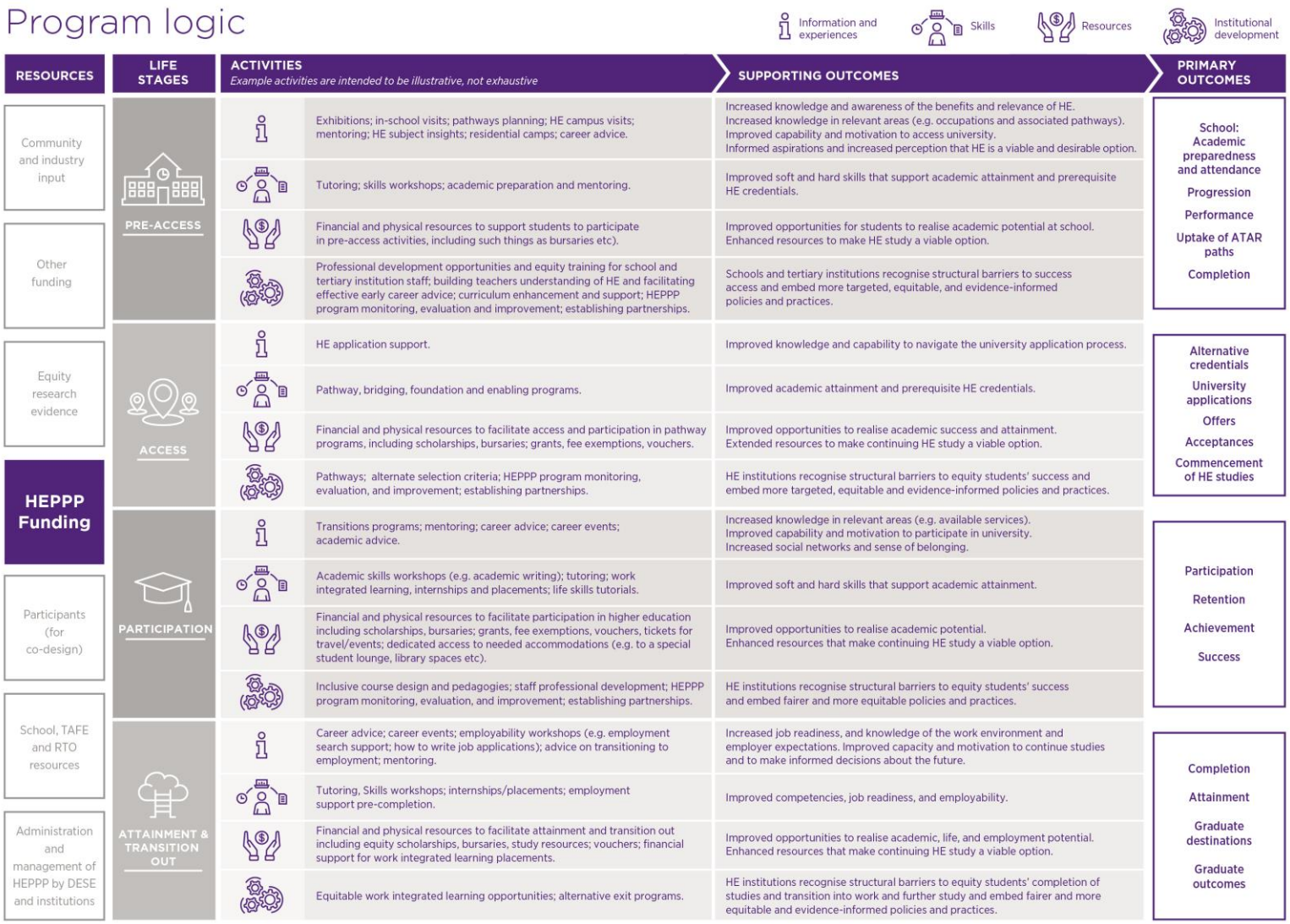
HEPPP Program Logic

A HEPPP Program Logic was also developed to articulate the pathways through which HEPPP-funded projects are likely to bring about change in primary outcomes. It includes 'supporting' outcomes, i.e., the initial outcomes that activities and programs intend to influence and which support the achievement of outcomes in the Student Pathway Map. Stakeholders described these as the 'missing middle' during consultations.

A Program Logic for the HEPPP (see Figure 2) was developed to:

- Map the intended relationships between HEPPP-funded projects and supporting and primary outcomes.
- Identify the key assumptions and contextual factors that could affect the HEPPP achieving its intended effects.
- Facilitate mapping and synthesis of individual university activities to the primary outcomes of the HEPPP.
- Provide an organising framework to identify priorities for evaluative inquiry, helping to inform the tools and methods required to support a coordinated and robust approach to data collection at the university level (and synthesis at the national level).

Figure 2. HEPPP Program Logic.



Overview of the SEHEEF

The SEHEEF delineates evaluation activities to be delivered at the university level and those to be considered at the level of the Australian Government. University level activities are segmented into Continuous Quality Improvement (CQI) and Impact Evaluation, with the latter encompassing both Quantitative Impact Evaluation (QIE) and Theory-Based Impact Evaluation (TBIE).

Continuous Quality Improvement: These activities aim to improve the design, implementation and performance of activities and programs. Continuous Quality Improvement involves a 3-staged process of planning, data collection, and reporting.

Impact Evaluation. Encompassing *Quantitative Impact Evaluations* and *Theory-based Impact Evaluations*, with a set of criteria to support universities to make an informed assessment of what programs they will prioritise for impact evaluation, and why.

> **Quantitative Impact Evaluations** aim to produce robust estimates of the impact of a program on target beneficiaries. They do this by comparing outcomes in the group receiving an intervention to a so-called counterfactual, a control group that did not receive the intervention.
>
> **Theory-based Impact Evaluations** are focused on mapping out the causal chain from a program's inputs to outcomes, recognising that the program is likely to be a 'contributory cause'. This contrasts with the attribution framing inherent in Quantitative Impact Evaluation approaches.

National level activities involve routine reporting of equity data, as well as reporting and analysis of sector level data on HEPPP-funded projects, and the synthesis of Impact Evaluations conducted at the university level.

The SEHEEF Overview Visual (Figure 3) demonstrates how university and national activities should be linked and triangulated to enable a comprehensive evaluation of the HEPPP.

Further information on each of the SEHEEF's components is summarised in Table 1. The Planning and Reporting Tools referenced in Table 1 can be found in the accompanying Appendix entitled, *SEHEEF Tools.*

Figure 3. The SEHEEF Overview.

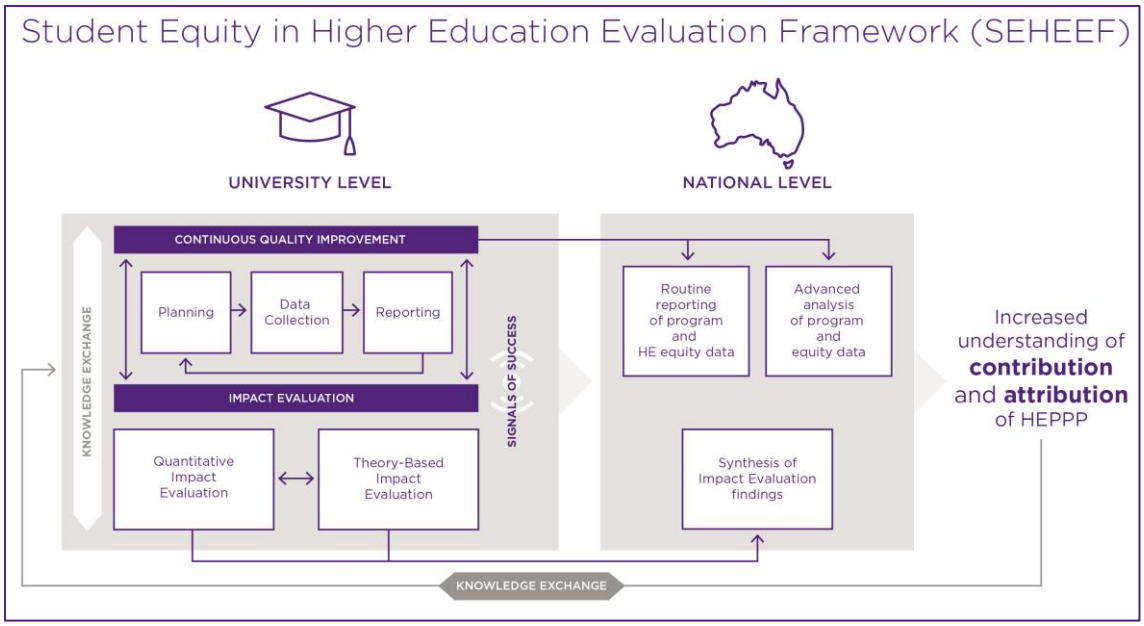


Table 1. The SEHEEF Key Components, for University and National Levels.

University Level			
SEHEEF Component	**Description**	**Tools/Methods/Requirements**	**Intended Benefits**
Continuous Quality Improvement (CQI)	• The application of consistent approaches to planning, data collection, and reporting. • Focused on aspects of program performance typically assessed in a process evaluation (e.g., participant reach; acceptability of the program to participants; enablers and barriers to implementation), and also on the non-causal assessment of the effect of a HEPPP-funded activity/program on outcomes. • Embeds three main questions throughout tools* 1. *How much did we do?* 2. *How well did we do it?* 3. *What outcomes did we achieve?* ** Note that these three questions are an adaptation from those used in the Results Based Accountability™ quality improvement approach.*	*SEHEEF Planning Tool* • Designed to capture key information on intended programs across each student life stage, including planned activities, intended outcomes, how each of the three CQI questions will be answered, and whether the program will undergo impact evaluation. *SEHEEF Program Data Reporting Tool* • Designed to capture data on basic parameters of HEPPP-funded activities, aggregated to the program level. *SEHEEF CQI Annual Reporting Tool* • Designed to provide universities with a structured tool to report on what programs they have delivered, what those programs have achieved, key enablers and barriers to program delivery, and the implications of findings. *Minimum data requirements* • Designed to enable individuals participating in programs to be linked to university administrative data systems.	• Clearer articulation of, and more systematic reflection on what programs will do, who they will affect, and the intended outcomes. • Planning of CQI is considered alongside program planning, defining data requirements for ongoing monitoring and data collection methods. CQI is built into the HEPPP project design. • Streamlined process for identifying what universities are planning to deliver and how they intend to collect information to inform CQI within those plans. • Systematic, consistent, and logical tools that link to other components in the SEHEEF, thereby helping to embed evaluative thinking. • Alignment of HEPPP project plans with CQI reporting, supporting improved accountability. • Reduced reporting burden on universities. • Promotes ongoing reflection of successes and challenges, including enablers and barriers to program implementation.
Impact Evaluation	*Quantitative Impact Evaluations (QIEs)* • Provides a robust estimate of the impact of a program compared with a counterfactual using quantitative methods. Addresses the *'what'* questions. *Theory-based Impact Evaluations (TBIEs)* • Provides multiple lines of evidence using different methods to understand what works, for whom, and in what circumstances. Addresses '*how'* and '*why'* questions by placing high importance on context.	*Prioritisation Tool* • Designed to support universities when prioritising HEPPP-funded programs for impact evaluation by presenting a standard set of criteria to consider. • Impact evaluations require specialist evaluation expertise.	• Rigorous estimate of how much of an observed outcome(s) can be attributed to a program or the average additional or net change caused by the program. • Enhanced insights into the causal process that explains how and why a program produced observed outcomes. • Can allow for the identification and consideration of key contextual factors. • Helps assess if the program is likely to work in other contexts.

National Level		
SEHEEF component	**Description and Method**	**Intended Benefit**
Routine reporting of program and HE equity data	• Continuation of routine reporting of equity data, complemented with sector level data on the number, reach and characteristics of HEPPP-funded activities. • Enabled through the systematic collection of data in the SEHEEF Data Reporting Tool.	• Regular and transparent reporting on key attributes of HEPPP-funded programs, including categorisation by student life stage and activity type.

Advanced analysis of program and equity data	• Analysis of quantitative data available at the sector level including:
	  • Leveraging data from the Widening Participation Longitudinal Study.
	  • QIEs of HEPPP-funded program participation at a national level, capitalising on the outcome data already captured in the university systems and using relevant comparisons and/or control groups.
	  • Leveraging data integration projects to expand the national evaluation to cover outcomes outside those already captured in the university systems, such as relevant outcomes at the Pre-access or Attainment and Transition Out stages.
		• Provides an overall assessment of the impact of HEPPP at the sector level.
		• Assessing the effectiveness of different types of programs within different student life stages, on supporting and primary outcomes.

Synthesis of impact evaluation findings	• Examining and synthesising the evidence from the impact evaluations (QIE and TBIE) gathered from the university sector SEHEEF activities. • Quantitative synthesis involves aggregating program level statistics and summarising study findings, study characteristics and contextual differences. • Qualitative synthesis involves summarising qualitative findings using thematic analysis to address specific questions.	• Assess the magnitude and variation of effects across the interventions and determine whether the effects are consistent. • Understand the reason for observed differences in findings between various programs by stratifying the results by population, setting, context, or other program characteristic.

Implementation Considerations

Governance

Successful implementation of the SEHEEF requires effective governance arrangements, leadership, and sector buy-in. Governance arrangements clarify roles, including responsibilities and relationships.

The Department's role would be to set the direction and communicate the requirements on universities to implement the Evaluation Framework. Leadership by the Department at the national level will provide clarity over purpose, process, and expectations for universities and other key stakeholders. The Department would also be responsible for planning and coordinating the national level SEHEEF components, including changes to routine reporting, advanced analysis of sector level data, and synthesis of university level impact evaluations.

Universities would be responsible for coordinating and implementing the university level components of the Evaluation Framework including the management and maintenance of data collection to support CQI for the HEPPP-funded projects they deliver, the selection of programs for, and the undertaking of, Impact Evaluations. If using an independent evaluator, the latter would entail the process of tendering and managing the evaluation project.

Resourcing

The resourcing of implementing the SEHEEF is a crucial consideration. While universities would report to the Department in accordance with the SEHEEF, there is no specific guidance as to how much of their HEPPP funding universities should allocate to undertake program evaluation. The resources and budget devoted to evaluation should be informed by the program's profile, complexity, risks, budget and intended outcomes. Programs that have substantial budgets, are complex, large-scale, of strategic significance or high risk will typically have a larger budget for evaluation. At the national level, substantial resources and specialist expertise are required for the Department to undertake the proposed SEHEEF activities.

A general scarcity of evaluation design expertise in the equity program areas at universities highlights that the SEHEEF could be accompanied by the implementation of a capability building model for providing evaluation advice and support to equity staff to: enhance skills, knowledge and confidence in planning, delivering and managing evaluation activities; increase adherence and commitment to the SEHEEF; facilitate knowledge sharing within and across universities; and enhance evidence-informed decision-making.

Implementing the SEHEEF in Indigenous HE contexts

The SEHEEF has been designed to be flexible to diverse evaluation designs and methods. In doing so, the SEHEEF can align with the recently published Indigenous Evaluation Strategy, which emphasises the need to place Aboriginal and Torres Strait Islander peoples at the centre of evaluation activities. This includes drawing upon the perspectives, knowledges, and priorities of Aboriginal and Torres Strait Islander people throughout all aspects of evaluation, from planning to communication of findings. The introduction of the IRLSAF will bring a sharper focus on the need for culturally appropriate evaluation approaches and methods.

Socialisation, Feasibility and Planning

The SEHEEF introduced in this report provides a preliminary framework for evaluating HEPPP that comes with proposed planning and reporting tools and respective categorisations.

It was socialised with the sector via a pre-recorded, online webinar. Stakeholders were also invited to provide feedback via a post-webinar survey. The findings indicated a high level of acceptance of the SEHEEF within the sector. Between 75%-96% of respondents provided agreement to statements that suggested a positive quality of elements of the Evaluation Framework, while open-ended feedback commonly aligned with the quantitative ratings and endorsed the Evaluation Framework or elements of it. Much of the critical feedback raised issues around implementation, particularly resourcing. The feedback from stakeholders has influenced the SEHEEF design presented in this report.

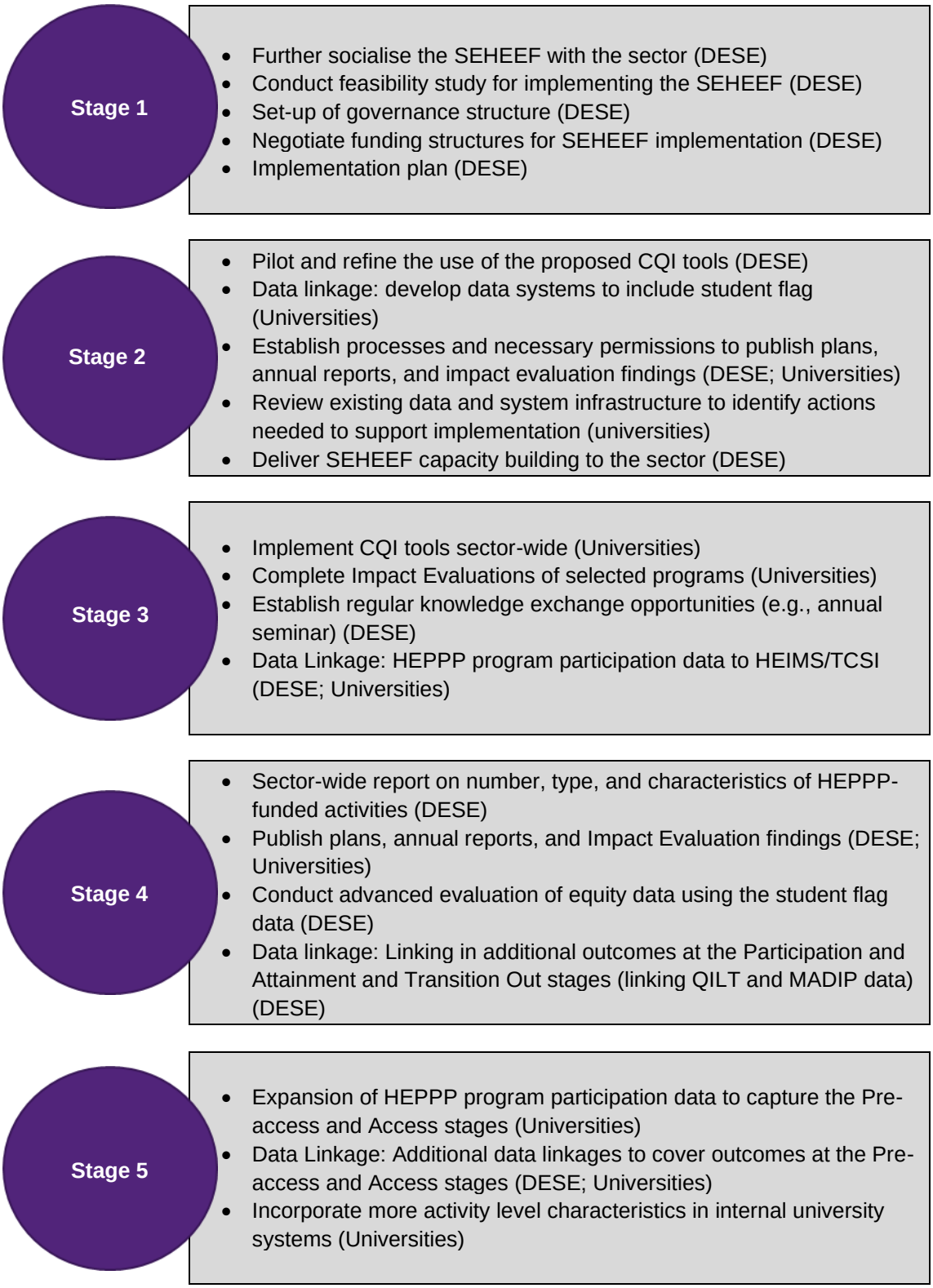
Thus, while the SEHEEF presented in this report has undergone some user testing, the Evaluation Framework will require a fuller appraisal by the HE sector, which could not be achieved within the timeline of this project. The feasibility of implementing the SEHEEF will also need further and more systematic scrutiny.

Figure 4 presents an indicative scenario for a staged process for the implementation of the SEHEEF. This illustrates some of the implementation activities and how the implementation could progress over time.

The Guidance Manual

A Guidance Manual has been developed to accompany the SEHEEF. The Guidance Manual is designed for university staff with responsibility for equity policy and programs, and relevant stakeholders. The purpose of this Guidance Manual is to assist people who are responsible for designing, implementing, managing, and/or reporting on HEPPP-funded programs and activities at a university level.

Figure 4. Indicative Stages for Implementing the SEHEEF.



Abbreviations

Commonly used abbreviations in this report.

Abbreviation	Definition
AA	Analysis Asset
ABS	Australian Bureau of Statistics
AC	Advisory Committee
ACARA	Australian Curriculum Assessment and Reporting Authority
ACT	Australian Capital Territory
AEDC	Australian Early Development Census
AIFS	Australian Institute of Family Studies
AIHW	Australian Institute of Health and Welfare
AISACT	Association of Independent Schools of the Australian Capital Territory
A/Prof	Associate Professor
ALSWH	Australian Longitudinal Study on Women's Health
ANU	The Australian National University
ATAR	Australian Tertiary Admission Rank
ATO	Australian Taxation Office
ATP	Australian Temperament Project
BLADE	Business Longitudinal Analysis Data Environment
CHeReL	Centre for Health Record Linkage
COP	Codes of Practice
CPO	Causal Process Observation
CQI	Continuous Quality Improvement
CVDL	Centre for Victorian Data Linkage
DESE	The Department of Education, Skills and Employment
DiD	Difference in Difference
DIPA	Data Integration Partnership for Australia
Dr	Doctor
DSS	Department of Social Services
EPHEA	Equity Practitioners in Higher Education Australasia
GOS	Graduate Outcomes Survey
GOS-L	Graduate Outcomes Survey-Longitudinal
GPA	Grade Point Average
GSS	General Social Survey

Abbreviation	Definition
HE	Higher Education
HEAT	Higher Education Access Tracker
HEI	Higher Education Institution
HEIMS	Higher Education Information Management System
HEPPP	Higher Education Participation and Partnerships Program
HES	Household Expenditure Survey
HILDA	Household, Income and Labour Dynamics in Australia
ICSEA	Index of Community Socio-Educational Advantage
IPTW	Inverse Probability of Treatment Weighting
IRLSAF	Indigenous, Regional and Low SES Attainment Fund
IRSD	Index of Relative Disadvantage
ISA	Independent Schools Australia
ISSR	Institute for Social Science Research
ITSA	Interrupted Time Series Analysis
IVE	Instrumental Variable Estimation
LFS	Labour Force Survey
Low SES	Low Socio-Economic Status
LSAC	Longitudinal Study of Australian Children
LSAY	Longitudinal Surveys of Australian Youth
LSIC	Longitudinal Study of Indigenous Children
MADIP	Multi-Agency Data Integration Project
MBS	Medicare Benefits Schedule
MoUs	Memorandums of Understanding
MSC	Most Significant Change
MSI	Multiple Strength Indicator
N/A	Not Applicable
NAPLAN	National Assessment Program – Literacy and Numeracy
NESA	NSW Education Standards Authority
NESB	Non-English Speaking Background
NCEC	National Catholic Education Commission
NCSEHE	National Centre for Student Equity in Higher Education
NCVER	National Centre for Vocational Education Research
NDIS	National Disability Insurance Scheme
NHS	National Health Survey
NIHSI	National Integrated Health Services

Abbreviation	Definition
NPPP	National Priorities Pool Program
NSW	New South Wales
NT	Northern Territory
PBS	Pharmaceutical Benefits Scheme
PID	Public Interest Disclosure
PPIP	Privacy and Personal Information Protection
Prof	Professor
PS	Propensity Score
RBA	Results Based Accountability
RCTs	Randomised Control Trials
RG	Regression Discontinuity
RRR	Rural, Regional, Remote
PSDS	Post-School Destination Survey
PSM	Propensity Score Matching
RTO	Registered Training Organisation
PVC	Pro Vice-Chancellor
QCAA	Queensland Curriculum and Assessment Authority
QGSO	Queensland Government Statistician's Office
QIE	Quantitative Impact Evaluation
QILT	Quality Indicators for Learning and Teaching
QILT-SES	Quality Indicators for Learning and Teaching Student Experience Survey
QILT-GOS	Quality Indicators for Learning and Teaching Graduate Outcomes Survey
QTAC	Queensland Tertiary Admissions Centre
QLD	Queensland
QWPC	Queensland Widening Participation Consortium
SA	South Australia
SACE	South Australian Certificate of Education
SATAC	South Australian Tertiary Admissions Centre
SEA	Socio-Educational Advantage
SEHEEF	Student Equity in Higher Education Evaluation Framework
SEIFA	Socio-Economic Indexes for Areas
SES	Student Experience Survey
SEW	Survey of Education and Work
SIH	Survey of Income and Housing
SOS	Student Outcomes Survey

Abbreviation	Definition
SRC	Social Research Centre
SSRI	Social Security and Related Information
STAT	Special Tertiary Admissions Test
TAC	Tertiary Admission Centres
TAFE	Training and Further Education
TAS	Tasmania
TBIE	Theory-Based Impact Evaluation
TCSI	Tertiary Collection of Student Information
Ten to Men	The Australian Longitudinal Study on Male Health
The Department	The Department of Education, Skills and Employment
TISC	Tertiary Institutions Service Centre
TVA	Total VET Activity
UAC	Universities Admissions Centre
UK	United Kingdom
UQ	University of Queensland
USI	Unique Student Identifier
UWA	University of Western Australia
VC	Vice-Chancellor
VET	Vocational Education and Training
VIC	Victoria
VTAC	Victorian Tertiary Admissions Centre
WA	Western Australia
WPLS	Widening Participation Longitudinal Survey

Glossary

Term	Definition
Activity	An individual component of work funded (wholly or partially) by HEPPP (or through other relevant Commonwealth funding) that either stands by itself or is an individual part of a program with other substantial components.
Commonwealth-funded equity (project, program or activity)	Refers to the relevant project, program or activity defined, and accommodates HEPPP as well as other and (potentially new) sources of Commonwealth funding, such as IRLSAF.
Continuous Quality Improvement (CQI)	Systematic planning, data collection and reporting of HEPPP-funded activities and programs designed to enable ongoing learning and improvement during the program lifecycle.
Evaluation	The systematic collection of information about the design, implementation and outcomes of a program in order to: enable judgments to be made about performance; understand what is working well, for whom, and in what context; inform decisions about future activities; improve effectiveness and impact.
HEPPP-funded (project, program or activity) or HEPPP (project, program or activity)	Refers to the relevant project, program or activity as defined, and are funded by HEPPP in the current context. However, it also accommodates and is relevant to other and (potentially new) sources of Commonwealth funding, such as IRLSAF. Also see 'Commonwealth-funded equity (projects, programs or activities)'.
Impact	The change in broader context that occurs as a result of program delivery, often large-scale and longer term. In the context of the SEHEEF, includes changes in primary outcomes.
Input	A resource (e.g. financial, human, equipment, materials) used to undertake activities/produce outputs as part of a program.
Indigenous, Regional and Low SES Attainment Fund (IRLSAF)	IRLSAF funds universities to support Indigenous students and students from low SES and regional and remote backgrounds. The IRLSAF combines the HEPPP, regional

Term	Definition
	loading, enabling loading and National Priorities Pool.
Input	A resource (e.g., financial, human, equipment, materials) used to undertake activities/produce outputs as part of a program.
Intervention	An activity or program that is implemented with the expectation that it will result in change.
Key evaluation questions	High-level questions that an evaluation is designed to answer, typically drawing on information from a number of sources, and asking about the appropriateness, effectiveness and efficiency of a program or activity.
National level	An action or output produced at the level of the Australian Government.
Output	A defined quantity of events, services or items that are provided by the activity or program (e.g., sessions, information sheets)
Primary outcomes	The important milestones for achieving successful HE studies (in terms of educational progression, attainment, and graduate destinations) or precursors of successful HE studies, which are situated in the education system (school attendance, performance, retention), and can be measured using administrative data.
Project	An umbrella term to cover programs and activities.
Program	A set of activities managed together over a sustained period of time funded (wholly or partly) by HEPPP (or through other relevant Commonwealth funding).
Program Logic	A diagram explaining how an activity, program or strategy is understood to contribute to a chain of results that produce the intended outcomes/impact.
Quantitative Impact Evaluation (QIE)	Evaluation that specifically aims to produce a quantitative estimate of the impact of a program on target beneficiaries, in

Term	Definition
	comparison with a counterfactual or control group; typically uses quantitative methods.
Specialised evaluation	An evaluation conducted by expert personnel independent of the activity/program that is being assessed; may be staff from another area of the university or staff of another organisation.
Student Life Course stages	Time points in the student experience at which HEPP-funded activities may take place: Pre-access, Access, Participation, and Attainment/Transition Out.
System Map	A visual representation of the components and boundary of a defined system, which aims to communicate the structure of a system in an understandable way. In the SEHEEF, use of the term System Map relates specifically to a stock and flow diagram that shows the system involved in a student accessing, participating, and succeeding in higher education.
Supporting outcomes	The initial outcomes that activities and programs are intended to influence and that support the achievement of the Primary outcomes included in the Student Pathway Map and Program Logic.
Theory-Based Impact Evaluation (TBIE)	An evaluation type which specifically looks for empirical evidence of the causal chain between program inputs and activities and the outcomes/impact that follow on from these; typically uses both quantitative and qualitative approaches.
Typology of Activities	A categorisation of all (and potential) activities that offers consistency between and within universities, reflective of what the activities intend to do or deliver.
University level	Refers to activities or programs run by individual universities, as opposed to ubiquitous programs that may operate at every university and/or be run at government level.

1. Introduction

- There are many equity projects taking place across the Australian Higher Education sector.
- To date, there has been no framework to systematically assess the impact of equity projects, particularly HEPPP-funded activities and programs, which presently constitute a bulk of equity-focused projects in Australia.
- The aim of this project is to design a robust, flexible, and stakeholder-informed Evaluation Framework that will structure and guide three levels of evaluation of the HEPPP (and from 2024 the IRLSAF):
    - Overall national program evaluation of the HEPPP and its outcomes.
    - Quality improvement evaluations of HEPPP-funded university projects.
    - Evaluations of the effectiveness and impact of HEPPP-funded university projects.

1.1 Chapter Introduction and Outline

Education can be a powerful agent of change for individuals, families, and communities. It increases skills and knowledge, health and livelihoods and advances greater social cohesion while reducing economic and social disadvantage (Bennett et al., 2015). A review of the literature demonstrates that there are many equity projects taking place in the Australian HE, and there is an associated, growing interest in understanding what constitutes an effective activity or program to achieve equity in HE.

Currently, there is no framework in the Australian HE sector to systematically assess the effectiveness of equity projects, particularly Commonwealth-funded programs and activities through programs such as IRLSAF, HEPPP, which presently constitute a bulk of equity-focused projects in Australia.

As part of the National Priorities Pool Program funding, the Australian Government has commissioned UQ to design an Evaluation Framework with an aim of structuring and guiding three levels of evaluation:

- Overall national program evaluation of the HEPPP and its outcomes.
- Quality improvement evaluations of HEPPP-funded university projects.
- Evaluations of the effectiveness and impact of HEPPP-funded university projects.

This chapter will contextualise the Equity in Australian Higher Education and Policy Responses, with a particular focus on HEPPP program history, components, and evaluation history. This section will then present the aims and scope of this project before outlining the structure of the report.

1.2 Background: Equity in Australian HE and Policy Responses

Whilst HE can be life-changing, there remain significant inequities in terms of who accesses and succeeds through HE in Australia.

The identified equity groups in HE include people from low SES backgrounds, people from regional and remote areas, people who identify as Aboriginal and/or Torres Strait Islander, people with disability, people from non-English speaking backgrounds (NESB) and women in

non-traditional areas of study (Martin, 1994). Despite some increase in the enrolment and participation of these equity groups in HE, there is evidence to suggest these equity groups are still under-represented in HE, and are significantly less likely to attend, complete, and/or succeed in HE studies (Bennett et al., 2015; Edwards & McMillan, 2015; Koshy, 2019; Koshy & Seymour, 2015; Tomaszewski et al., 2020; Tomaszewski et al., 2018).

Policy responses have attempted to address this gap. For instance, in Australia, the 'demand driven funding system' was implemented between 2010 and 2017 with the objective of increasing the domestic student numbers and providing under-represented groups greater access to HE (Australian Government, 2009). This followed in response to Recommendation 29 of the Bradley Review of Australian HE (Bradley et al., 2008) which called for a 'demand-driven entitlement system for domestic HE students' which would enable providers to enrol as many eligible students into their courses and receive corresponding government subsidies for those students. This recommendation was linked to another recommendation: to increase participation and attainment levels in Australian HE, with evidence that the existing system for the allocation of student places was insufficient to effectively deal with student demand over the past decade (Edwards, 2011).

According to the Productivity Commission (2019), the success of this program was mixed. For instance, while there were increasing numbers of young people attending university (from 53% in 2010 to an estimated 60% in 2016, based on the Longitudinal Surveys of Australian Youth (LSAY) data), university participation increased for some equity groups but not for others. Students from low SES backgrounds, and first-in-family students were more likely to participate in Australian HE following the increase in university places. However, it was not associated with increased participation rates for Aboriginal and/or Torres Strait Islander people or for young people from regional or remote areas.

At the same time, the HEPPP was established in 2010 to fund universities to undertake equity initiatives that would improve access to undergraduate courses for people from low SES backgrounds, and improve their retention and completion rates (ACIL Allen Consulting, 2017). The key objective of the HEPPP has been to promote equality of opportunity in HE by improving the extent to which persons from a low SES background participate, remain, and succeed in HE, and obtain HE awards.

As part of the Job-ready Graduates package (DESE, 2020c), from 2021 the HEPPP has been refocused to support students who are:

- From regional Australia
- From remote Australia
- Aboriginal and/or Torres Strait Islander
- From low SES backgrounds

Further, the Australian Government has announced the IRLSAF to fund universities to support Indigenous students and students from low SES and regional backgrounds. This model, a consolidation of existing equity programs, including HEPPP, to streamline the process but retain the focus on equity and access, will be implemented from 2024 and the IRLSAF will allow universities to use their funding more flexibly to best serve the needs of their local communities.

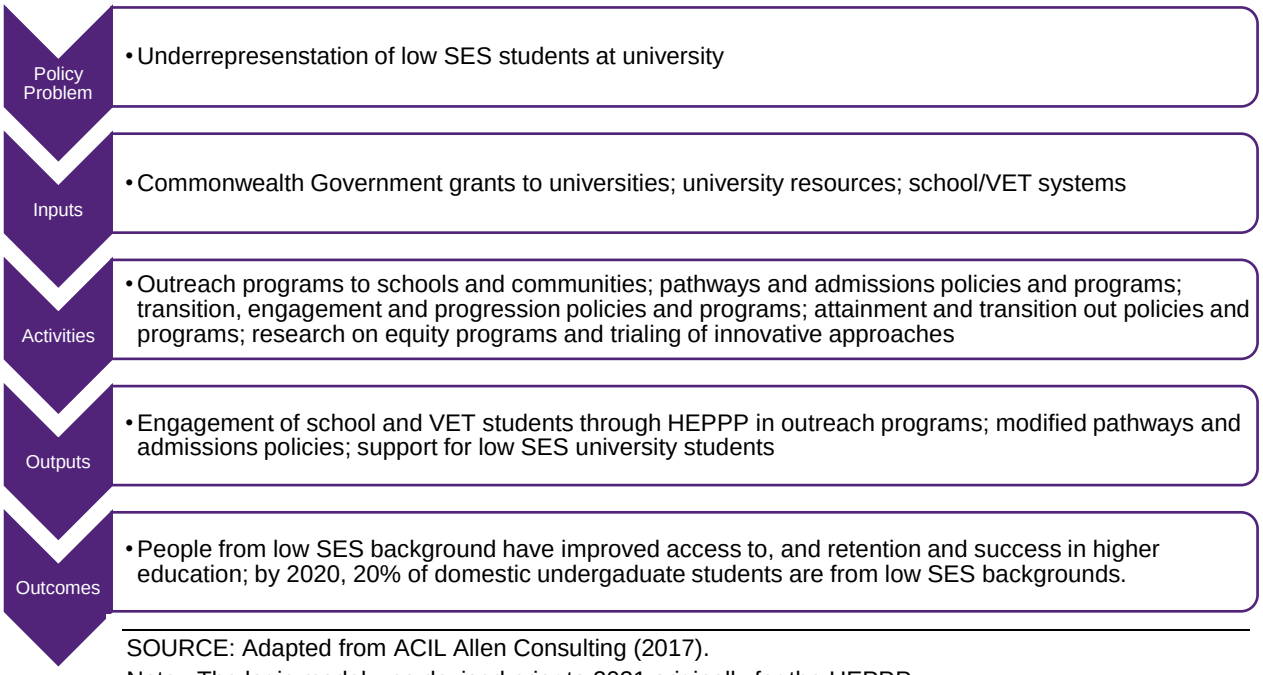
1.2.1 HEPPP Program History and Components

As mentioned, the HEPPP is an Australian Government program established in 2010 with the key objective of promoting equality of opportunity in HE. The HEPPP provides funding to Table A universities and was initially established to provide funding to *providers* to undertake activities and implement strategies that improve access to undergraduate courses for people from low SES backgrounds and improve their retention and completion rates. This further followed the Bradley Review of Australian HE (Bradley et al., 2008), in which Recommendation 31

specifically recommended a HEPPP type program with increased funding to support students from low SES backgrounds.

Figure 5 presents ACIL Allen's logic model for the HEPPP. This was developed by ACIL Allen Consulting (2017) as part of their evaluation of the HEPPP and was devised based on program documentation and input from the Department.

Figure 5. The Logic Model for the HEPPP by ACIL Allen (2017).



SOURCE: Adapted from ACIL Allen Consulting (2017).
Note: The logic model was devised prior to 2021 originally for the HEPPP.

When established, the HEPPP was structured around two main components, Partnerships and Participation, with the addition of the National Priorities Pool in 2014.

The Partnerships Component

The objective of the Partnerships Component of the HEPPP was to increase the total number of people from low SES backgrounds who access and participate in HE through effective outreach and related activities with appropriate stakeholders. Potential stakeholders included schools, State/Territory Governments, Vocational Education and Training (VET) providers and community groups, while the potential projects could:

a) assist in improving the understanding and awareness of HE as a viable post-school option;

b) assist in pre-tertiary achievement, either at school or via an alternative pathway, to enable consideration for access to HE;

c) encourage an increase in the proportion of such people who apply for attendance at a provider; and

d) support such people in linking with HE providers.

The Participation Component

Initially, the objective of the Participation Component of the HEPPP was to increase the participation of current and prospective domestic students from low SES backgrounds in

accredited undergraduate qualifications at providers. Under this Component, providers received funds based on their respective share of domestic undergraduate students from low SES backgrounds. Examples of acceptable Participation activities that were initially stipulated ranged from mentoring, peer support, tutoring, as well as inclusive entry processes, monitoring of student progress as well as academic preparation programs, transition programs and programs for parents.

National Priorities Pool

The National Priorities Pool commenced in 2014, with the aim of increasing the effectiveness of the implementation of HEPPP, nationally and at an institutional level, and funded two types of projects: projects proposed by universities in line with the National Priorities Pool annual investment plan priorities, and projects commissioned by the Australian Government to meet specified government goals and inform the policy basis for the programme[3].

1.2.1.1 Current status

From 2021, the HEPPP was widened to include students from a low SES background, those from regional or remote areas and Aboriginal and/or Torres Strait Islander peoples. The objective is to support equity in HE by improving:

- outreach to widen aspiration and promote HE to persons from a low SES background, persons from regional areas and remote areas, and Indigenous persons; and
- the extent to which persons from a low SES background, persons from regional areas and remote areas, and Aboriginal and/or Torres Strait Islander persons access, participate, remain, and succeed in HE, and obtain HE awards.

Grants are made available based on provider's respective share of domestic undergraduate students from a low SES background, students from regional areas and remote areas, and Aboriginal and/or Torres Strait Islander students. Eligible grant activities target current and prospective domestic undergraduate students or support tailored programs for students from low SES backgrounds, students from regional areas and remote areas, and Aboriginal and/or Torres Strait Islander students; including tailored programs that address the specific disadvantages that are experienced by students and prospective students.

Further, the Australian Government has announced the IRLSAF to fund universities to support Indigenous students and students from low SES and regional, rural and remote backgrounds. The IRLSAF combines the HEPPP, regional loading, enabling loading, the National Priorities Pool and Regional Partnerships Project Pool.

1.2.2 HEPPP Program Evaluation History

ACIL Allen Consulting and the Wallis Consulting Group were engaged by the Department to evaluate the HEPPP, with the findings released in 2017. Up until that point, there had been no systematic evaluation of the HEPPP, although there had been various evaluations of specific projects funded by the HEPPP (e.g., see Bennett et al., 2015; Zacharias, 2017; Zacharias et al., 2018). The purpose of the evaluation was to assess the effectiveness, efficiency, and appropriateness of the HEPPP. The overarching recommendation of the evaluation by ACIL Allen Consulting (2017) was to continue with the HEPPP funding, noting that with HEPPP funding there had been many projects targeting low SES background students, and some of these had demonstrated effectiveness in improving certain outcomes. However, with its recommendations for continuance, it was also recommended that a rigorous evaluation framework be developed to measure and monitor impact, and inform future programs.

[3] Previously, the National Priorities Pool Program (NPPP) was a component of the HEPPP known as the National Priorities Pool. Under the IRLSAF, the NPPP is now a standalone program.

RECOMMENDATION 1: That, given the evidence of emerging impact on student access and equity, HEPPP be continued as a funded program to further encourage and build on the progress achieved. At the same time, there are a number of areas which have been identified as requiring improvement. The focus of the activities, projects and equity groups to be targeted and the funding arrangements to support this focus require improvement. Also required is the development of an embedded evaluation framework with which to collect the necessary data to better measure and monitor impact, and inform future improvements. (ACIL Allen, 2017, pxvii)

1.3 Purpose, Aims and Outputs

1.3.1 Purpose and Project Aims

The purpose of this project is to design a robust, flexible and co-designed Evaluation Framework for the overall program evaluation of the HEPPP, and guide universities in continuous improvement and project evaluations. As highlighted above, the aim is to produce an Evaluation Framework that will structure and guide three levels of evaluation.

In doing so, the Evaluation Framework will enable an evaluation of the impact and effectiveness of the HEPPP by advising on capturing rigorous data and setting out a consistent approach to university level evaluations of their HEPPP-funded projects. It will form part of the Department's strategy to foster evidence-based practice by improving the evaluation of equity activities.

An aim of this project is for the Evaluation Framework to build in flexibility to account for changes to Commonwealth-funded equity programs, the effect of ongoing uncertainty on the delivery of programs, and opportunities for innovation[4]. Further, another aim is for the Evaluation Framework to be co-designed with the sector, and steps taken to involve stakeholders throughout the project will be detailed under the methodology section (see Chapter 2).

1.3.2 Project Outputs

In addition, this project has produced a report (this report) that outlines the approach taken during the project and the details of the Evaluation Framework. It advises on factors to consider for the evaluation of equity programs. In addition, this project has produced a Guidance Manual for universities and relevant stakeholders to support consistent measurement, evaluation and reporting of individual HEPPP-funded activities.

The outputs of the project:

- Provide the basis for the Australian Government to assess the effectiveness of equity programs over coming years.
- Provide the basis for university reporting of equity programs including collection of appropriate data.
- Provide the basis for universities to perform quality improvement evaluations of individual equity projects.
- Provide the basis for universities to perform effectiveness evaluations of individual equity projects.

[4] While this report refers to HEPPP-funded projects, the SEHEEF is designed to be flexible to be relevant for changes to Commonwealth funding of equity programs.

This in turn will:

- Inform and support continuous improvement of equity policies and practice in the Australian HE sector at a national scale.
- Inform equity practice and quality-improvement of Commonwealth-funded projects at individual universities across the Australian HE sector.
- Enable continuous improvement and strategic prioritisation of equity projects.
- Demonstrate effectiveness of equity programs and encourage co-investment.
- Support university practitioners to improve equity outcomes.

1.4 Project Scope

The parameters in scope of consideration for the project are detailed in Table 2.

Table 2. Parameters and Scope of the Project

Parameter	In scope
HE providers	Focus on Table A (38 public universities) providers
HE studies	Undergraduate studies leading to Bachelor level qualification
Students	Onshore domestic students
Framework design	The design/development of a framework to be implemented in HE in Australia. This project does not implement the framework in HE settings.
Pathways to University	Includes school leaver-to-university pathway and alternative pathways to university.
HEPPP-funded Projects	Partnerships (e.g., outreach) and Participation (e.g., during university) activities, excluding National Priorities Pool Program.

1.5 Outline of Report

The following report is structured into two main parts. The first part outlines the foundational work that was conducted to design an Evaluation Framework for use in HE equity. Specifically, Chapter 2 details the methodological approach, including the steps taken to ensure stakeholder co-design of the Evaluation Framework. Chapter 3 details the foundations of the SEHEEF, including a conceptualisation of the HEPPP, the preliminary System Map developed by Enzyme Consulting Group for the Department, the Student Life Course Stages, a Typology of Activities, The Student Pathway Map and the Program Logic.

The second part outlines the Evaluation Framework and guides implementation. Chapter 4 provides an overview of the Evaluation Framework and describes the key components. Chapter 5 provides university level evaluation of HEPPP-funded projects, and Chapter 6 outlines the national level evaluation of HEPPP. Chapter 7 presents and considers the feedback on the preliminary Evaluation Framework received from the sector. Chapter 8 discusses issues around implementation, whilst also outlining next steps and an indicative staged scenario of implementation.

The University Of Queensland
AUSTRALIA
CREATE CHANGE

Institute for
Social Science Research

PART 1: Building the Foundations of the SEHEEF

METHODOLOGY AND RESULTS

2. Methodology

The project was conducted across three work packages.

Stakeholder input was obtained and considered throughout all stages of the project, to make certain that the final Evaluation Framework design was heavily informed by the needs of the sector.

Work Package 1 established the building blocks for the Evaluation Framework, through:

- A structured, rapid review of literature related to equity projects in Higher Education.
- Consultations with the team scoping the Widening Participation Longitudinal Study (as a cognate project commissioned by the Department).
- Workshops with the wider HE sector to obtain input and feedback on a drafted Program Logic, Key Evaluation Questions, and System Map developed by Enzyme Consulting Group.

Work Package 2 involved:

- A data audit to determine how existing data sources could be used to evaluate HEPPP activities and to identify information gaps.
- A data linkage review to identify meaningful data linkages between existing data collections to enhance evaluation of the impacts/effectiveness of HEPPP and HEPPP activities.
- In-depth consultations with data experts and data custodians to probe issues around data content and quality, ongoing and planned data integration projects, and privacy and ethics considerations.

Work Package 3 involved:

- Designing the Evaluation Framework and accompanying Guidance Manual and reporting tools for universities.
- Socialising the preliminary Evaluation Framework with the sector through a pre-recorded webinar and obtaining input from stakeholders via a post-webinar survey.

2.1 Chapter Introduction and Outline

The project commenced in March 2021. Following the setup of the governance structure and initial planning of the project[5], the project was designed around three work packages (see Table 3). The project adopted a co-design approach with the sector to ensure that it built on current evaluation activity and expertise and met the needs of the sector. This chapter outlines the governance structure and methodology of the project, including the three work packages and the stakeholder consultations.

[5] As agreed with the Department, an ethics exemption was obtained for this project.

Table 3. Summary of Project Work Packages

Work Package	Aim
1	Evaluation Framework Building Blocks
2	Understanding available data and identifying data linkage opportunities
3	Developing the Evaluation Framework and Guidance Manual

2.2 Governance Structure

An initial step in the project was the appointment of an Expert Advisory Group. The Expert Advisory Group members were selected by the project team, in consultation with the Department. An Expert Advisory Group was designed to include subject-matter experts in equity intervention frameworks and equity data in Australia, and representatives from peak bodies representing equity practitioners (e.g., Equity Practitioners in Higher Education Australasia (EPHEA)) and universities (e.g., Universities Australia). A list of members is provided in Table 29 in Appendix A.

The primary role of the Expert Advisory Group was to provide input on the identification and selection of stakeholders and review the components of Evaluation Framework.

The project also engaged closely with the QWPC who played an important role in ensuring our approach was feasible and embedded a practitioner and administrative/logistics perspective. In addition, two ISSR evaluation specialists were engaged in an advisory capacity to expedite framework development.

2.3 Work Package 1: Evaluation Framework Building Blocks

Work Package 1 was designed to establish the building blocks for the Evaluation Framework. This was achieved by conducting a structured, rapid review of literature related to equity projects in HE (See Section 2.3.1 for more detailed methodology). In the review of literature, there was a focus on the short- and long-term outcomes of equity programs, the pathways that bring about change, and enablers and barriers to their success. Building upon a previously developed mapping and classification of HEPPP activities (Kubler et al., 2020), the review focussed on activities taking place along different stages of the student life course, while considering the type of activity (e.g., mentoring, material support, academic support).

In addition, consultations were undertaken with the team scoping the Widening Participation Longitudinal Survey (WPLS), as a cognate project commissioned by the Department, to consult on their classification of HEPPP activities, while further consultations (methodology discussed in Section 2.6.4) were conducted with the wider HE sector to scope the feasibility and usefulness of the drafted Program logic (See Section 3.7) and the Key Evaluation Questions (See Section 6.2), as well as the System Map developed by Enzyme Consulting Group (see Figure 17 on 164).

2.3.1 Literature Review Methodology

This section presents the process of a structured, rapid review of literature on equity interventions in Australian HE, with a particular focus on their outcomes, activities, evaluation methods, the pathways that bring about change, and enablers and barriers to their success.

A search was conducted in the following databases to undertake the structured, rapid review of literature on equity interventions in Australian HE: ProQuest Education Collection (includes

ProQuest Education plus ERIC), Informit A+ Education, Informit POLICY (searches data on the APO website) and Scopus.

The search terms had some slight variations depending on the database searched but were structured around the following terms: (HEP OR Universit* OR “Higher Education” OR “Tertiary education”) AND (“Equity Program” OR “Equity Intervention” OR “student equity” OR “equity group” OR Outreach OR “Alternative entry” OR “Pathway Program” OR “diverse background*”) AND Australia*.

The results were filtered between 2010-2021, and also filtered for articles that included the terms in title and abstract when possible (such as in ProQuest and Scopus. The other databases did not have this feature).

A domain search of ACER.org/au was also conducted using Google. The key terms for this search were: (HEP OR University OR “Higher Education” OR “Tertiary education”) (“Equity Program” OR “Equity Intervention” OR “student equity” OR “equity group” OR Outreach OR “Alternative entry” OR “Pathway Program” OR “diverse background”) site:acer.org/au

In total, 1102 articles were initially identified. A title and abstract screen left a total of 132 articles. The predominant reasons for exclusion were not covering equity initiatives (n =688) and being duplicates (n = 282).

In addition, a review of documentation in the equity space was undertaken, including:

- A review of Australian HE equity programs conducted by Bennett et al (2015). This review includes a rigorous literature review of programs that demonstrated impact through quantitative and qualitative methodologies, as well as an online survey invitation to all Australian public universities (Table A Providers), with selected follow-up phone interviews (Bennett et al., 2015). Equity initiatives were captured from 34 Australian (Table A) universities and 9 international institutions.
- The ACIL Allen Consulting (2017) report, which presents the findings and recommendations of the 2016 evaluation of the HEPPP. The methodology comprised a document analysis of program documentation, university reporting and evaluations, and international HE equity programs; quantitative data analysis and economic modelling of implementation and outcomes data; and consultations, including interventions, surveys and a written submission process.
- A review conducted by Zacharias (2017) of how different Australian universities designed and implemented HEPPP-funded programs between 2010-2015 and how these had contributed to student outcomes and organisational change. The methodology of this review included an analysis of HEPPP annual progress reports, HEIMS equity performance data, interviews with policy makers, case studies and student workshops.
- A report presenting the Critical Interventions Framework, which was designed to assist in advancing equity in Australian HE by identifying the characteristics and foci of initiatives and effective strategies (Naylor et al., 2013). The conclusions were drawn from patterns of access and participation for key equity target groups following the 2008 Review of Australian HE and the existing literature and institutional reports provided to the Commonwealth as part of the HEPPP.
- A literature review of equity programs and a proposed activity typology, that was prepared to inform the development of a WPLS (Harvey et al., 2021).
- A review of international literature of equity in HE that incorporated a systematic review of literature, a rigorous review which identified and analysed themes, problems and insights of the literature, as well as a critical synthesis of these processes (Burke et al., unpublished)

2.4 Work Package 2: Understanding Available Data and Identifying Opportunities

A data audit and data linkage review were conducted in Work Package 2 and built on the work conducted in developing a Program Logic (see Section 3.7), the Typology of Activities (see Section 3.5) and The Student Pathway Map (see Section 3.6).

2.4.1 Data Audit

The data audit set out to review existing data sources with relevance to the evaluation of the HEPPP, and to identify opportunities for data linkage and further data collection to support the Evaluation Framework.

The data audit entailed a comprehensive review of technical documentation pertaining to the 41 relevant datasets (see Appendix D from page 166 for full details), including information available online, and technical reports. The data audit findings are discussed further in Section 5.3.1.2. The datasets can be grouped into the following categories:

- **Administrative data sources (national- or state-level)**, capturing administrative records captured or compiled by various institutions at the State or Commonwealth levels;
- **Population surveys (national- or state-level)**, comprising wide-reaching surveys that are administered to whole populations (although due to non-response they do not cover the full populations) and are typically managed by government-affiliated agencies;
- **Sample surveys (national- or state-level)**, utilising samples of target populations.

2.4.2 Data Linkage Review

A data linkage review was also undertaken, with the objective of identifying meaningful data linkages between existing data collections that would allow better evaluation of the impacts/effectiveness of HEPPP and HEPPP activities. The review considered technicalities and logistics of data linkage, privacy and ethics considerations, as well as exploring appropriate analytical methods. A plan is outlined in Section 6.4.3 for linking datasets for purposes of HEPPP evaluation, and for addressing privacy and other ethical as well as logistical issues (e.g., variables required for linkage).

2.4.3 Data Consultations

In addition, to ensure the data audit and data linkage review was comprehensive and complete, the project team engaged in in-depth consultations with data experts and data custodians to probe specific issues around data availability, data content and quality, ongoing and planned data integration projects, feasibility of data linkages and potential challenges related to data infrastructure, privacy and ethics considerations, legal frameworks, and issues around self-determination and data ownership. Section 2.6 provides details of the consultations and Chapters 5 and 6 present the key findings from these consultations.

2.5 Work Package 3: Developing the Evaluation Framework and Guidance Manual

The outputs from Work Package 1 and Work Package 2 were synthesized to inform a detailed Evaluation Framework and an accompanying Guidance Manual for evaluating the HEPPP overall and university-specific activities. The Evaluation Framework was drafted to provide an enduring structure to guide monitoring, evaluation, and strategic learning nationally, and for individual universities. The Department and the QWPC reviewed the Draft Evaluation Framework, prior to socialising the preliminary Evaluation Framework and contents of the

Guidance Manual with the sector through an online webinar. The sector was invited to provide feedback following consultation via a post-webinar survey (See Section 2.6.3 for details of the consultations).

2.6 Stakeholder Consultations

This section discusses the approaches taken to facilitate stakeholder participation in the process of co-designing the Evaluation Framework. The perspectives of stakeholders were crucial to make certain that a range of views were incorporated and to maximise stakeholder buy-in and support for the Evaluation Framework.

The purpose of consultation included input in the development of the building blocks of Program Logic and Key Evaluation Questions, gathering and scrutiny of information related to available data and linkage opportunities, and feedback on the preliminary Evaluation Framework. The process for identifying and selecting stakeholders as well as the methods used for engaging with stakeholders for each work package is detailed below.

Stakeholders involved in consultations can be distinguished from other groups involved in the project, including the Expert Advisors, QWPC and WPLS Scoping Team. The Expert Advisors and the QWPC provided advice on the overall project including the identification of stakeholders. In addition, the QWPC reviewed the Program Logic, Key Evaluation Questions, The Student Pathway Map and Preliminary Evaluation Framework. In addition, the Department and the WPLS Scoping Team are referenced separately, as their role in this project was to work alongside or in consultation with UQ in the design of the Evaluation Framework.

The term “stakeholders” refers to others involved in consultations, including senior managers, program managers, program delivery personnel, program partners, equity practitioners, and equity researchers drawn from peak bodies, HE organisations, and universities.

2.6.1 Stakeholder Workshops (Work Package 1)

The purpose of consultation as part of Work Package 1 was to openly discuss and debate issues around the key constructs underpinning the Evaluation Framework in particular a draft Program Logic, a set of Key Evaluation Questions and the original System Map developed by Enzyme Consulting Group for DESE. In order to achieve this purpose, workshops were delivered online using Mural with a lead facilitator as well as breakout room facilitators to facilitate small group discussion and to manage the posting of comments on the Mural board.

Identification of key stakeholders

The project team started identifying potential stakeholders while simultaneously generating initial thoughts on the framework. The identification of these stakeholders involved several steps.

- Initially, the project team identified and classified a list of potential stakeholders and stakeholder groups who could be impacted or have an interest. Stakeholders were broadly classified into representatives from peak bodies (e.g., Universities Australia, Group of Eight, Australian Technology Network, Innovative Research Universities, and Regional Universities Network), policy specialists, academic researchers, equity practitioners/equity area administrators, and senior university staff with equity in their remit.
- The list was supplemented with suggestions from the expert advisors. These expert advisors were emailed at an early stage of the project to request their help in the process of identifying relevant stakeholders for the consultation process. They were asked about the types of groups and organisations that could be impacted or might have an interest in the project. In addition, they were asked if they knew specific people who should be involved in the consultative process.

- The list was further supplemented by the Department. There was particular attention to the selection of university staff making sure to invite stakeholders across a range of levels, from Vice-Chancellor (VC) and Pro Vice-Chancellor (PVC) through to directors and managers (which included a range of professionals in equity, student support and outreach and covering all Table A universities).
- At about the same time, an email was sent from the Department to VCs and peak bodies about the project. In addition to details of the project, the email encouraged universities to register their interest in the SEHEEF consultation and co-design workshops and webinar and to emphasise the importance of their contribution to the ongoing development and implementation of effective equity practices. From this, interested stakeholders emailed us requesting to be involved in the consultation process.

From these activities, a list of almost 70 relevant stakeholders was created. The list was seen to have good coverage of stakeholders from a range of professional roles and organisations including researchers, representatives from state government, policy officers who have equity in their remit, equity practitioners, and university staff.

Inviting the stakeholders

In late April to early May 2021, an email was sent to the stakeholders on the list inviting them to take part in consultations. The invitation stated the background to and purpose of the consultations and the ways in which participation in this process would occur. Attached to the invitation was an information sheet, which contained more detail about the SEHEEF and the associated consultations. The letter encouraged stakeholders to provide a suitable nominee in their place if they were unavailable. Some stakeholders suggested other potentially interested people to contact. An email reminder to stakeholders who had not responded was sent after one week.

Participation

After agreeing to participate and accepting the date and time of the workshop, an email was sent to stakeholders with an agenda for the workshop, the draft Program Logic and Key Evaluation Questions and tips on using Mural.

In total, 61 stakeholders participated in the three 2-hour semi-structured online workshops (17 in workshop 1; 24 in workshop 2; and, 20 in workshop 3 which included 6 stakeholders from the Department). These stakeholders have been acknowledged in Table 30 in Appendix A, unless instructed otherwise by a participant. After the workshops, Mural remained open for a limited period to enable stakeholders to add additional comments and to review and respond to comments made by others. See Box 1 for a summary of the stakeholder workshops conducted as part of Work Package 1.

Several stakeholders, who were unable to attend the planned sessions but wanted to provide feedback, were sent emails with attachments and the link to Mural where they provided their feedback.

Box 1. Stakeholder Consultation Activity: Evaluation Tool Workshop

Stakeholder Consultation Activity 1
Evaluation Tool Workshops

Purpose of consultation activity

- The workshops had several key purposes:
- To introduce key sector stakeholders to the SEHEEF project and to understand its relevance to them.
- To obtain stakeholder feedback and insights on preliminary drafts of a Program Logic Model and a set of high-level Key Evaluation Questions.

Method of consultation activity

The project team designed and facilitated three 2-hour semi-structured online workshops using the digital collaboration tool, Mural. Participants were provided with an overview of the SEHEEF project and were introduced to the preliminary evaluation tools, including a draft Program Logic, Key Evaluation Questions and a System Map designed by Enzyme Consulting Group. Breakout rooms were used to facilitate small group discussion and to manage the posting of comments on the Mural board. Mural remained open for a limited period to enable stakeholders to add additional comments and to review and respond to comments made by others.

Stakeholders involved

Stakeholders were identified through a stakeholder mapping exercise and invited to participate. A total of 61 stakeholders from across key stakeholder groups (DESE; equity/education research/ policy specialists; equity practitioners; peak bodies) participated. Several participants, who were unable to attend the planned sessions, provided feedback via email and Mural.

Summary of key feedback received

In total, over 600 comments were received. Of these, 395 related specifically to the Program Logic and Key Evaluation Questions. Approximately 50% of comments were suggestions for new/revised content or relatively minor points of clarification. Four main themes emerged from analysis of the remaining comments:

Specificity: the importance of distinguishing between evaluation of HEPPP at the national level and evaluation of HEPPP funded activities/programs at the university level was emphasised.

Over-emphasis on Pre-Access stage: The draft Program Logic was perceived as unbalanced towards the Pre-Access student life stage (mostly encompassing outreach-type activities) and that a greater emphasis on the Participation stage was required.

Deficit model: The design of the draft Program Logic and the language used was deemed as being framed in deficit terms, without consideration of the structural and societal forces that serve to marginalise prospective and current students from particular groups.

Systems change: The draft Program Logic included an activity type labelled ‘systems changing activities’. Participants were supportive of this approach, but commented that there was a lack of follow through in terms of outcomes (which were focused at the student level).

Other feedback of note related to: the capacity and capability within the sector to design and deliver evaluation; the importance of mixed-method evaluation approaches; the desire for more opportunities to share practice and learn from others; the potential for better connection between planning and reporting.

Influence of feedback on the SEHEEF

The development of a more detailed Program Logic (see Section 3.7), which articulates pathways and outcomes by student life stage and activity type.

The inclusion of additional and more refined outputs and outcomes in the Program Logic.

The inclusion of an ‘Institutional Development’ category into the Typology of Activities and Program Logic. This recognises that the realisation of improvements in student-level outcomes is dependent on improvements across different levels of the system, including the student, family/community, schools and universities, and the broader socioeconomic and policy context.

Stakeholder Consultation Activity 1 Evaluation Tool Workshops
The rewording of deficit-based language. An emphasis on the need for a mixed-methods approach and triangulation of evidence in order to understand impact at the individual program and national level.

2.6.2 Data Expert Consultations (Work Package 2)

The purpose of consultation as part of Work Package 2 was to ensure the data audit and data linkage review was comprehensive and complete. Virtual meetings were used to discuss specific issues around the quantity and quality of available existing data with relevance to the SEHEEF and to identify opportunities for data linkage and privacy and data governance considerations.

Identification of key stakeholders

Initially, a decision was made to consult at least 10 key data experts and data custodians. A list of relevant organisations was created based on the data sources assessed as relevant for the Evaluation Framework. These organisations were from across Australian Government and state government agencies, statutory bodies of the Australian Government and state governments, and universities. Potential stakeholders were identified from these organisations given their knowledge and expertise on the relevant data. Occasionally, these stakeholders suggested further stakeholders that should be included in the consultations to cover certain areas of expertise, which resulted in an expanded scope of these consultations.

Inviting the stakeholders

Stakeholders on the list were emailed inviting them, or somebody on their team, to participate in a 30-minute semi-structured meeting held online using either Microsoft Teams or Zoom as the communication platform. The invitation stated the background to and the purpose of the consultation.

Participation

After receiving an agreement to participate, a meeting was scheduled. Prior to meeting, an email was sent to stakeholders providing some indicative questions about the content of data collected by them and possible linkages and some background materials to contextualise how the different outcomes in the data map have been derived.

A total of 18 meetings with 25 stakeholders from 13 organisations participated in the consultation process, significantly exceeding the initial targets. Stakeholders were encouraged to send any further comments via email.

Box 2 presents an overview of the consultation process and a high-level summary of the feedback received.

Box 2. Data Audit Stakeholder Consultations

Stakeholder Consultation Activity 2 **Data Meetings**
Purpose of consultation activity The 30-minute virtual meetings had several key purposes: 1. To introduce stakeholders to the SEHEEF project and to understand its relevance to them. 2. To get stakeholder feedback on the datasets reviewed as part of the data audit. 3. To gain stakeholder feedback and insights into existing data content and quality, ongoing and planned data linkage projects, and privacy and data governance considerations.
Method of consultation activity Thirty-minute semi-structured meetings were held using either Microsoft Teams or Zoom as the communication platform. An email was sent out to stakeholders to invite them to participate in the consultation activity. If willing to participate, a meeting was scheduled. Prior to meeting, stakeholders were sent some background materials to contextualise how the different outcomes and indicators have been derived, and some indicative questions about the content of data collected by them and possible linkages. Stakeholders also were encouraged to send any further comments via email.
Stakeholders involved The relevant organisations to engage in consultation were identified based on findings from the data audit. Stakeholders were identified from these organisations given their knowledge and expertise with the relevant data. A total of 25 stakeholders from across Australian Government and State Government agencies, statutory bodies of the Australian Government and State Governments, and universities participated in this consultation activity. The participating stakeholders are acknowledged in Table 31 in Appendix A, unless instructed otherwise by a participant.
Summary of key feedback received What were the main points covered by the feedback? • *Individual-level data*: commentary on identifying individual-level administrative data sources capturing the relevant outcomes of school and university students and feedback on processes around accessing this data • *Identifiable data:* discussions on who stores personal information; custodians of various data; who has de-identified data. • *Opportunities for data linkages:* opportunities for accessing linked data that already exist; the role of Data Integrating Authorities that can perform data linkage within and between Commonwealth and State/Territory data collections; importance of standardising data collections; importance of building in appropriate timeframes into projects for data linkages. • *Linkage IDs:* discussion on how different organisations use their own identifiers; the advantages of creating a common linkage spine to enable data from different sources and organisations to be linked together; the role of the Unique Student Identifier (USI). • *Privacy and ethics:* commentary on the feasibility of accessing the necessary data, including for data integration projects.

Stakeholder Consultation Activity 2
Data Meetings

Influence of feedback on SEHEEF

- Prioritisation of projects at the stage for evaluations over the short term.
- Recognising that data integration projects are most feasible in the context of national level evaluation.
- Identifying opportunities for HE sector to emulate models for integrated data assets that exist in other areas (e.g., health).

2.6.3 Online Webinar (Work Package 3)

The purpose of consultation as part of Work Package 3 was to collect feedback and input from stakeholders on the preliminary Evaluation Framework, particularly in terms of their acceptance of the framework, and the feasibility and appropriateness of the framework.

In order to achieve this purpose, a webinar was pre-recorded for socialising the framework to stakeholders and an online survey was created using Qualtrics software for gathering of feedback from stakeholders. See Box 3 for further details on the purpose and methodology of the consultation. The findings are presented in Chapter 7.

Identification of key stakeholders

The project team began with the list of stakeholders identified during the workshops. This list was supplemented with 12 interested stakeholders (10 from universities and 2 from peak bodies) who emailed the project team requesting to be involved in the consultation process after receiving an email from the Department. The email sent by the Department encouraged stakeholders to register their interest in participating in the final round of consultation. From these activities, a list of 126 relevant stakeholders was created.

Inviting the stakeholders

At the beginning of September, a notification email was sent to the stakeholders on the list to tell them that the preliminary Evaluation Framework was almost at the stage of socialising with stakeholders.

It was in mid-September that an email was sent inviting stakeholders to access the webinar and complete a short online survey. The webinar invitation message included:

- A link to a website to view the pre-recorded webinar;
- Details on how to link to the online, Qualtrics survey to provide feedback after they watch the webinar; and
- Zoom links to attend post-webinar drop-in sessions should they require any additional information or need clarification on information in the webinar.

An email to remind stakeholders to complete the survey was sent after two weeks.

Participation

Online survey. Stakeholders were invited to participate in an online survey after they had watched the webinar. The survey was open between 15 September and 4 October 2021.

The online survey was completed 28 times. Of the survey participants, 17 identified as individual and 11 as organisational participants. Individual and organisational participants were professionally most often located in the areas of HEPPP practice or university administration (n=19). Five survey participants worked in the research sector, two represented peak bodies and the remaining two represented other areas.

Drop-in on-line sessions. Two drop-in sessions were conducted via Zoom, one on 17 September and one on 21 September. The purpose of these sessions was to provide an opportunity for stakeholders to engage with the project team and ask clarification questions. In total, 4 people participated in these sessions, all of whom provided feedback via the survey.

Box 3. Stakeholder Consultation Activity: Post-Webinar Survey

Stakeholder Consultation Activity 3 Post-Webinar Survey
Purpose of consultation activity The purpose of the consultation was threefold: • to capture the level of acceptance of the preliminary SEHEEF in the HE sector; • to inform revisions of the preliminary SEHEEF as part of this project; and • to inform potential future activities surrounding the development and implementation of the SEHEEF.
Method of consultation activity The project team developed a 75-minute webinar. Viewers were provided with an overview of the foundations of the SEHEEF and were introduced to the key components of the SEHEEF to structure and guide the 3 levels of evaluation. The webinar was housed on the ISSR website and accompanied by a slide deck and tools and resources for people to view. An online survey was used to collect both quantitative and qualitative feedback on the preliminary Evaluation Framework from stakeholders. It took about 5 minutes to respond to 16 statements related to the key components and then stakeholders had the option of adding written feedback into comment boxes. The online survey remained open between 15 September and 4 October 2021.
Stakeholders involved Stakeholders from the workshops list and who emailed the project team to register their interest in participating in consultations were emailed about the webinar and post-webinar online survey. It was possible for other stakeholders not on the list to be involved since the webinar and online survey could be seen and shared by anyone with the link. A total of 28 individuals and organisations working across key sectors (university research; HEPPP practitioner / university administrator; peak bodies) completed the post-webinar survey. Individuals and organisations have been acknowledged in Table 32 in Appendix A, unless instructed otherwise.

2.6.4 Other Consultations

The project team also sought ongoing input from the sector during the development of the Evaluation Framework. A summary of these consultations is provided below.

- The team engaged in two separate consultations with the WPLS scoping team. The purpose of the consultations was to consult on their classification of HEPPP activities, to obtain input on the Program Logic and Key Evaluation Questions and to consult on how they saw the role of the WPLS in building evidence in HE equity.
- A 3-hour workshop was conducted with the QWPC and the UQ Outreach Manager. Feedback was sought on the design of the Program Logic, which was revised following feedback from the stakeholder consultation, as well as the Typology of Activities. This resulted in disseminating the proposed Typology of Activities more widely to equity practitioners within Queensland Universities, where they trialled classifying their activities into the proposed typology. Feedback was provided and incorporated into the Typology of Activities.

- A number of universities also provided the team with their Annual (HEPPP) Progress reports. This was prompted by earlier conversations about some limitations with existing reporting templates. Analysing the Annual (HEPPP) Progress reports enabled the team to obtain a sense of what activities were currently being undertaken, and how they were being reported. The team reviewed this documentation, along with the publicly available Access and Participation Plans, to identify gaps in reports and opportunities to strengthen and streamline processes.
- A one-hour consultation with the Student Engagement team at Swinburne University of Technology was undertaken following the stakeholder workshops as part of Work Package 1. The purpose of this was to obtain insight into current evaluation practices that were being implemented at Swinburne University of Technology.
- A one-hour consultation was conducted with Liam Downing, to further explore the perspectives on evaluation of HEPPP-funded activities in HE in Australia that he communicated through a journal paper commentary. In addition, an objective of the consultation was to learn from his experience of working as an Equity Programs Evaluation Coordinator in a university.
- Throughout the project, the project team consulted with the Department to obtain feedback on the elements of the Evaluation Framework, (including the Typology of Activities, System Map, Student Pathway Map, Program Logic, Evaluation Framework design, prioritisation tools and reporting tools). Throughout the project, summarised feedback from the stakeholder consultations was discussed with the Department and input was provided on the elements of the framework.
- The draft Guidance Manual and reporting tools were also distributed to the QWPC members for feedback.

3. The Foundations of SEHEEF

- The SEHEEF Foundations described in this chapter have the benefit of improving the level of consistency in how the evaluation of HEPPP-funded projects is understood, described, and implemented within and across universities.

  This chapter describes the foundations of the SEHEEF, which include:

  - A set of key underpinning principles: credible; implementable; flexible; useful; transparent, and inclusive and culturally appropriate.
  - A high-level conceptualisation of the HEPPP to contextualise the SEHEEF.
  - A Typology of Activities designed for the needs of the SEHEEF, based on what activities do or deliver, and who they target: *Information and experiences; Resources*; *Skills,* and *Institutional development.*
  - A Student Pathway Map contextualising the supply of HE undergraduate places at Table A universities, eligibility and selection criteria for filling these funded places, and school leaver and non-school leaver pathways.
  - A HEPPP Program Logic showing pathways and outcomes of HEPPP by student life stage and activity type, and acting as a guiding tool for practitioners in determining the supporting and primary outcomes that they can expect to achieve based upon activity type(s) and student life stage.

3.1 Chapter Introduction and Outline

Robust evaluation frameworks are built on strong foundations, including key underpinning principles (See Section 3.2) and a clear definition of the evaluand (the thing being evaluated). This chapter provides a summary of the approach taken to develop the foundations of the SEHEEF. The contents of this chapter were established from the rapid review of literature, as well as the stakeholder consultations conducted as part of Work Package 1 (see Box 1 on page 41).

This chapter summarises the foundations of the SEHEEF, starting with the SEHEEF Principles in Section 3.2. Section 3.3 presents a high-level conceptualisation of the HEPPP and Section 3.5.3 provides a categorisation of the key student life stages. The distinction between HEPPP-funded programs and HEPPP-funded activities is provided in Section 3.5.2, including a Typology of Activities designed specifically for the needs of the SEHEEF (See 3.5.3). Section 3.6 presents a Student Pathway Map that serves as a bridge between a System Map previously designed by Enzyme Consulting Group for the Department and the HEPPP Program Logic (Section 3.7), which brings together the earlier sections to show pathways and outcomes of HEPPP by student life stage and activity type.

These important foundations provide structure to the SEHEEF, helping to inform tools and tools, and aiming to provide clear and consistent concepts, definitions, and guidance for those involved in the implementation and evaluation of HE Commonwealth-funded equity programs. These will be discussed in the next chapter.

3.2 SEHEEF Principles

The scope and design of the SEHEEF is underpinned by a set of key principles (see Table 4). A smaller set of principles were identified for the Project Proposal based on the team's professional experience. These have since been refined and expanded, informed by the literature review and stakeholder consultations (see Section 2.6). These principles should remain an important consideration during the implementation phase of the SEHEEF. They provide a basis for decision making when universities and the Department are planning, managing, and conducting evaluation activities, and when reporting and disseminating findings. A principles-based approach to evaluation was also recently highlighted as particularly relevant to the Indigenous HE context (Smith et al., 2018) and underpins the national Indigenous Evaluation Strategy (Productivity Commission, 2020).

3.3 Conceptualisation of the HEPPP

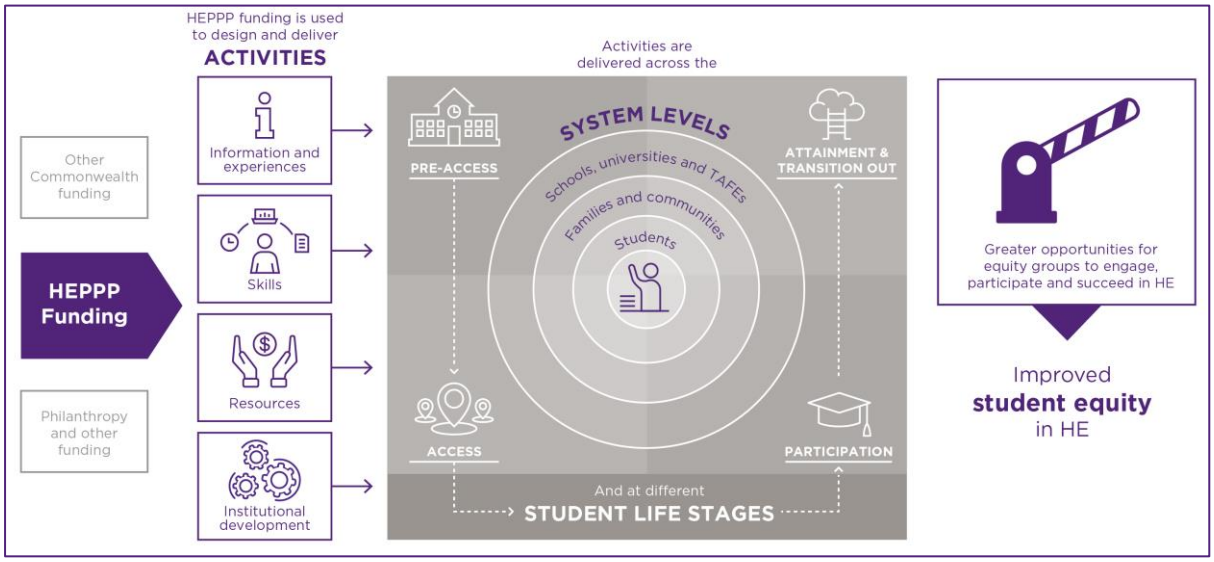
As noted in Section 1.2, the HEPPP program seeks to advance equity in HE by providing funding that enables universities to implement strategies that improve access to undergraduate courses for people from regional and remote Australia, low socio-economic status (SES) backgrounds, and Aboriginal and/or Torres Strait Islander persons (DESE, 2021). HEPPP also helps to improve the retention and completion rates of those students. The primary purpose of the HEPPP is to improve student-level equity outcomes. This focus at the student level risks the HEPPP being conceptualised as deficit-based, without adequate consideration of the structural and societal forces that serve to marginalise prospective and current students from particular groups. This has been emphasised in prior work (Burke et al., unpublished) and was a prominent theme that emerged during stakeholder consultations for this project (see Box 1 on page 33).

In response to this feedback, a high-level conceptualisation of the HEPPP was developed to provide a perspective against which certain components of the SEHEEF could be anchored. While the primary objective of the HEPPP is to improve equity in student-level outcomes, the SEHEEF has been designed to incorporate features that can support a broader, socio-ecological perspective of student outcomes. This is consistent with the conceptual approach used by Smith and colleagues in their report on evaluating student equity in Indigenous Higher Education contexts (Smith et al., 2018). The visual shows that HEPPP funding is used to design activities (usually bundled into programs), that are delivered during different stages of the student life cycle and at different system levels (student level, family and community level, and institutional level). These activities are intended to increase the opportunities for accessing, participating and succeeding at university and to improve student equity in higher education. While ostensibly simple, elements of Figure 6 will appear throughout the SEHEEF.

Table 4. Principles underpinning the SEHEEF.

Credible	The HE sector is more likely to accept and implement the SEHEEF if they perceive it to be credible. The SEHEEF has been developed by drawing on insights from a range of sources, including: existing relevant literature on equity in HE; previous equity frameworks; insights from practitioners currently designing, implementing and/or managing equity programs; academics currently engaged in equity-related research; stakeholders engaged through a series of consultation activities.
Implementable	For an evaluation framework to be useful, it must be implementable. The SEHEEF takes into consideration key barriers to implementing and sustaining robust and systematic evaluation activities, identified by previous research and feedback received from key stakeholders. At the university level, it has been designed to be practical and user-friendly for equity professionals and administrators, while providing the necessary guidance required for more specialised forms of evaluation. At the national level, it has been designed to refine and complement existing reporting structures, while also supporting longer-term ambitions to better harness existing and forthcoming data opportunities. These features are designed to contribute to the SEHEEF being integrated into the core business of HE equity program planning and delivery, thus making it sustainable over the long term.
Flexible	For the SEHEEF to create an enduring impact on the equity evaluation landscape in HE in Australia, it must balance the need to promote consistency and standardisation (where appropriate), while also enabling flexibility to ensure relevance and application to the diverse uses of HEPPP funding. The SEHEEF has been designed to incorporate systematic and standardised planning and reporting, alongside more generic guidelines that are adaptable to different contexts and to programs and activities of different scales and intents. It is therefore anticipated that the SEHEEF will continue to have relevance when the IRLSAF is implemented from 2024.
Useful	The SEHEEF draws on the key principle of utilisation-focused evaluation (UFE), which is that an evaluation (and evaluation frameworks) should be judged on its usefulness to its intended users. This underpins the level and range of stakeholder consultation as part of the development of the SEHEEF. The SEHEEF also proposes mechanisms through which the findings from continuous quality improvement and evaluation activities can be shared and synthesised, to maximise learning and improvement opportunities for the government and HEPPP-funded universities.
Transparent	The importance of evaluation findings being made available was a recommendation of the previous evaluation of the HEPPP (which itself is publicly available) and is consistent with the Australian National Audit Office Guidance. Transparency improves accountability and enables evaluation lessons to inform decision making. The development of the SEHEEF has been a transparent one, with stakeholder feedback and how it has informed the framework, summarised, and shared. This allows others to understand the process through which the SEHEEF was developed and the reasons for its design and content. Publishing evaluation plans and findings (positive or negative) will maintain this 'spirit of transparency', expressed as desirable by stakeholders during consultation activities.
Inclusive and culturally appropriate	The extension of the HEPPP to IRSLAF will bring a sharper focus on the need for culturally appropriate evaluation methods. The SEHEEF has been designed to incorporate and value evaluation designs and methods that are consistent with the national Indigenous Evaluation Strategy and the Framework of evaluation in an Indigenous HE context. Furthermore, there is scope within the Evaluation Framework for success and impact to be defined by the intended beneficiaries of HEPPP-funded programs, rather than relying purely on a list of pre-defined outcomes. Such participatory approaches enhance inclusivity across all equity groups and can help to ensure that evaluation practice embraces an equity and culturally informed.

Figure 6. Conceptualisation of the HEPPP



3.4 Student Life Course Stages

Life course models are used in the social sciences to study trajectories or longitudinal relationships. To this end, they define typical stages in people's lives, and sometimes mark milestones along a timeline for comparing different population groups or cohorts (Lamb et al., 2015; Sawhill et al., 2013; see Table 33 in the Appendix for a summary of stages that have been used).

Student life course models have been specifically designed to study and address disadvantages in accessing and successfully completing HE studies. While these are more or less defined by the position of an individual or a group of people in the education system, there are also differences depending on the context of what they are used for. In Australia, there have been broadly two approaches to defining those:

a) An approach for mapping equity interventions
b) An approach for mapping equity performance

The first approach attempts to define stages for HE relevant equity projects along people's life courses prior and during HE studies. In Australia, this work has been framed by developing a Critical (equity) Intervention Framework (Bennett et al., 2015; Naylor et al., 2013). The iteration of the student life course model in Bennett et al. (2015) closely follows the original model by Naylor et al. (2013) and consists of four broader stages:

1. Pre-Access (Outreach to schools and communities)
2. Access (Pathways and Admissions, Including Enabling Pathways)
3. Participation (Transition, Engagement and Progression)
4. Attainment and Transition Out

This model has been popular in Australia since it was used by ACIL Allen Consulting (2017) for structuring their HEPPP evaluation reporting and recently by Harvey et al. (2021) for developing a classification of activities that sit within the four broad stages.

The student life course has also been of interest in work concerned with developing equity performance frameworks for HE. Acknowledging that inequities in HE studies are also the result of inequities experienced earlier in life, this work has largely been concerned with identifying indicators of inequities at various points throughout the education system. While performance frameworks do not explicitly specify student life course models, their structure, which is commonly expressed in terms of tiers and/or domains is partially or even largely reflective of underlying student life course models. Examples of such work are the performance frameworks developed by the Australian Institute of Health and Welfare [AIHW, ((2014)] and the National Centre for Student Equity in Higher Education [NCSEHE, ((Pitman & Koshy, 2015)].

In the intervention model (a) the student life course stages relate to the point in the education process at which interventions occur/should occur[6]. In the performance model (b) student life course stages largely[7] relate to when outcomes from interventions occur or are captured. Both types of models, intervention and performance models, can have value in evaluation frameworks.

For the purpose of the SEHEEF, the intervention model (Bennett et al., 2015) is utililised. The model connects with the point of interventions (HEPPP activities), which allows to build the program logic forward towards outcomes, which often accrue or can only be measured at later stages. Further, the intervention model also shares wider familarity and acceptance within the HE sector.

The following sections describe how these student life stages can be used alongside a Typology of Activities to inform a Program Logic Model that articulates pathways to supporting and final outcomes.

3.5 SEHEEF Typology of Activities

3.5.1 Developing a Typology of Activities for the SEHEEF

There are thousands of HEPPP-funded activities undertaken by universities and others each year (ACIL Allen Consulting, 2017). Universities have different foci of addressing disadvantage in terms of targeting students, identifying relevant barriers or outcomes, and defining ways of attempting to achieve outcomes. Activities can also be aimed at different equity groups. Consequently, there is a breadth of language used to categorise such activities.

A core requirement for the SEHEEF is that information can be aggregated from individual activities and individual universities. More specifically, the SEHEEF should enable consistent categorisation of activities within and between universities. This enables robust monitoring and helps to guide the evaluation of programs by connecting types of activities to relevant outcomes. This is the fundamental basis of the approach taken in the United Kingdom (UK) as part of the Higher Education Access Tracker (HEAT) System [(Higher Education Access Tracker, 2021), see Box 8 on page 76 for more detail].

[6] The life course stages are not purely defined by individuals' locations within an educational or non-educational trajectory, which affects the boundary between the Participation and the Attainment and Transitioning Out stage. The latter is defined in terms of delivering employability/career enhancing programs, which may be assumed to take place in the latter stages of one's studies. However, as such programs can also be delivered in the earlier stages of university studies there is ambiguity about the boundary between the Participation and Attainment and Transitioning Out stage.

[7] Performance type models are also influenced by conceptual allocations of performance indicators in a (outcomes) domain and tier structure so that not all outcomes that are bundled within a domain or tier occur at the same stage of a student life course.

3.5.2 HEPPP-funded Activity vs HEPPP-funded Program

HEPPP funding is often utilised for equity programs that contain various components (e.g., a program that contains university experiences, mentoring, and the provision of financial or non-financial resources). Programs can bundle components in various ways, over various timeframes, and delivered at different stages of the student life course. They can also vary greatly in size and structure and how they evolve over time. This makes it difficult to define a typology of programs and explains why previous frameworks and projects have provided categorisations at the activity level. In addition, universities are asked to report data at the activity and not the program level: this unit of measurement can be standardised within and between universities. Table 5 presents the definitions of a HEPPP -funded[8] activity and program for the purposes of the SEHEEF.

Table 5. Definitions of Commonwealth-funded Equity Activities vs Programs.

Activity	An individual component of work funded (wholly or partially) by HEPPP (or through other relevant Commonwealth funding) that either stands by itself or is an individual part of a program with other substantial components.
Program	A set of activities managed together over a sustained period of time funded (wholly or partly) by HEPPP (or through other relevant Commonwealth funding).

In practical terms, it is typically the case that different parts of universities are responsible for delivering and managing a particular HEPPP-funded program, which is made up of individual activities. Some institutions currently categorise a single activity as a 'program', particularly for reporting purposes. Table 6 shows the distinction between activities and programs using real HEPPP-funded examples. Table 7 provides examples of substantive single-activity programs.

[8] As previously mentioned, while this report refers to HEPPP-funding the SEHEEF and foundational components also accommodate other (potentially new) sources of Commonwealth funding, such as the IRLSAF.

Table 6. Examples of Previous and Current HEPPP-Funded Programs with Multiple Activities.

Program	Program Description	Activities
Aspire UWA University of Western Australia	The objectives of Aspire UWA are to work in partnership with schools to raise aspirations for higher education by: improving the motivation and attainment of students in LSES communities; encouraging and supporting Indigenous students in culturally appropriate ways; supporting school staff through professional development workshops and scholarships; and engaging parents and the wider community.	Hands-on activities, delivered in schools and on campus. Study skills, motivational and revision workshops. Residential camps. Specialist support from the Faculty of Health and Medical Sciences and the School of Indigenous Studies.
In2Uni University of Wollongong	The In2Uni program aims to: build collaborations and partnerships with stakeholders to develop programs; raise the aspirations of students toward higher education; build student capacity to access higher education; and strengthen relationships with parents and local school communities to raise awareness and increase knowledge about higher education.	On campus visits. Study skills programs. Workshops. Master classes. A university preparation program. Teacher professional development activities.
Young Achievers Program University of Queensland	The Young Achievers Program aims to support the tertiary study and career aspirations of senior secondary school students who might not otherwise have access to university as a post-school option.	Residential camps. Financial assistance while at school. Scholarship support at university. Mentoring. Flexible entry scheme. Study and career planning sessions.
LSES Application Fee Waiver program Central Queensland University	The LSES Fee Waiver program aims to improve access to university for people from low SES backgrounds by providing Queensland Tertiary Admissions Centre (QTAC) vouchers to remove the QTAC application fee as a financial barrier and create an opportunity to engage and provide information to help prospective students make informed decisions about their careers.	QTAC voucher distribution. Influencer outreach. Admission pathway materials. Workshops and related resources.
First-Year Experience program The Australian National University	The First-Year Experience program aims to: build the cultural capital of under-represented students transitioning to university; strengthen their sense of self-efficacy which enhances their personal, social, emotional, and physical well-being; increase a sense of belonging for under-represented students at an elite university; and develop partnerships across the university community to avoid duplication of service and provide support to students on how to navigate university life.	Workshops on a range of topics, including employability, resilience and leadership development. Transition camp. Development of online information, resources and forums. A targeted social media strategy. Development of For Your Entertainment podcasts.

Table 7. Examples of Single-Activity Programs.

Activity	Description
Predictive Analytics	The use of predictive and learning analytics to identify risks of failure and attrition, with a focus on low SES students, in order to inform student-facing services.
Scholarships	Scholarships awarded on the basis of low SES and further disadvantage. Successful applicants receive scholarship payments of a particular value per annum for the duration of their course.

3.5.3 A Typology of Activities for the SEHEFF

There are various ways of deriving categories for HEPPP activities. For example, activities can be considered in terms of *what* they do, in terms of delivering a substantive input/service to a situation (e.g., skill-based course). Activities can also be categorised in terms of *how* they are delivered (e.g., workshop) or their *intended outcome* (e.g., aspiration raising). Sometimes, activities are further categorised based on *when* they are delivered (e.g., outreach – junior high school).

Previous categorisations of HEPPP activities have been generated as part of developing HE equity intervention and monitoring and evaluation frameworks (Australian Institute of Health and Welfare, 2014; Bennett et al., 2015; Harvey et al., 2021; Naylor et al., 2013; Pitman & Koshy, 2015; Zacharias, 2017). Most of these are based on student life course/student stage models with three or more stages and are typically based on desktop auditing a sample of HEPPP activities existent at the time.

These typologies were reviewed in the context of the SEHEEF needs, which are noted below.

1. The activity types need to be defined clearly and consistently, and in a way that they can be understood and (administratively) implemented by relevant staff at universities, schools and other institutions.
2. The definition of activity types (and their labels) needs to be informative of what they do so they can be related to types of intended outcomes (to inform continuous quality improvement and impact evaluation).
3. Collectively, the individual activity types should capture all types of existing HEPPP activities.
4. The activity types need to be defined generically enough to allow capturing of possible future developments in defining equity activities and programs. In other words, the activity types should have sustained validity. This is particularly important in the context of the IRLSAF being implemented from 2024.

To facilitate a link between activities and outcomes and to achieve the other requirements of an activity categorisation for SEHEEF that were outlined above, the project team have used a combination of what activities do/deliver and who they target to derive four types of activities. Three of the four types can be seen as service delivery activities that target people from equity groups and/or their immediate environments (parents, communities) during various stages of the student life course. They provide information and experiences, resources, or skills development directly to equity groups or their immediate environments, to improve equity students' opportunities of accessing HE studies, or to improve their capacity to be successful in HE studies and the labour market. The fourth type of activity aims to achieve the same broad outcomes for students by developing professional practice and institutional processes and cultures within the education system, enabling it to become more amenable to the backgrounds of equity students.

An overview of each type of activity is provided below (see Box 4- Box 7). Activity subtypes are also proposed as an optional predetermined list to further narrow activity classification. This is consistent

with the approach taken in the HEAT UK tracker system (Higher Education Access Tracker, 2021). See Box 8 on page 76 for more information. A more detailed consideration of the outcomes against each type of activity and student life stage is provided in Section 5.3.1.2.

Box 4. Activity Type 1: Information and Experiences.

Activity Type 1: Information and experiences	
What	Activities that primarily focus on providing information and/or related interactions/experiences. This could entail information about educational and career pathways, application and enrolment processes, university service structures, the content of subjects, assignment requirements, academic standards, costs of living, labour markets and other things. If parents and communities are the intended participants of such activities, they might also entail information about processes of disadvantage, and effective strategies for encouragement and support of equity students.
Who they target	Students (primary, secondary, tertiary) and non-students. Activities can also include or be designed for parents and communities.
When	During all student life stages.
How	These activities can be variously implemented via presentations, workshops, emails, fairs, camps, mentoring, online content, site visits and other modes. Many of the activities currently labelled as outreach, pre-university experience, and orientation programs, activities involving fairs, buddies, peer-support, mentors, role models, sample lectures and others fall under this type.
Why	To stimulate HE participation, and/or success in HE studies and/or in the labour market by providing information and interactions/experiences that shape perceptions, inform aspirations, and influence decision-making and behaviour. This also entails a role for enhancing parental and community involvement and support.

Box 5. Activity Type 2: Skills

Activity Type 2: Skills and attainment	
What	Activities that primarily focus on developing individual attributes and/or skills. This could include academic skills, digital skills, soft skills (e.g., self-control, perseverance), employability skills (e.g., job search, job application skills), professional capabilities (e.g., via internships), or life skills (e.g., budgeting, planning) that support access, participation or success in higher education. This also includes activities that not only offer skill development but also lead to achieving milestones for alternative entry pathways.
Who they target	Predominantly students [school, Vocational Education and Training (VET), university] and non-students (after leaving school).
When	During all student life stages.
How	Activities of this type can be implemented via workshops (e.g., academic writing, how to write a curriculum vitae or job application), educational or training programs (including bridging programs, foundation courses) or online material (such as multimedia tutorials), study groups, tutoring programs, mentorships, online tools and possibly others.
Why	To develop skills and attributes, which give people/students from equity backgrounds a better chance of successfully negotiating the milestones throughout the student course as well as achieving favourable employment outcomes.

Box 6. Activity Type 3: Resources.

Activity Type 3: Resources	
What	Activities that provide physical goods or financial assistance to recipients in support of HEPPP objectives.
Who they target	Mainly students (school, while on alternative entry pathway, university).
When	During all student life stages.
How	Activities of this type are usually delivered via: scholarships; bursaries; fee exemptions; vouchers; resources (e.g., laptops, internet connection, tickets for travel/events and particularly to support participation in pathway programs or work integrated learning); and dedicated uses/access (e.g., to a special student lounge, library spaces, accommodation, childcare).
Why	To improve opportunities to realise academic potential and making HE study viable.

Box 7. Activity Type 4: Institutional Development.

Activity Type 4: Institutional development	
What	These are activities that primarily focus on developing institutional systems including processes, structures, cultures, values, and professional practices.
Who they target	Existing educational and service delivery systems, structures, staff, and stakeholders.
When	During all student life stages.
How	These activities can be wide-ranging and include: • Professional development opportunities in the education system (e.g., for career advisors, equity practitioners, school teachers, lecturers). • Changes to admissions processes, pedagogies and the curriculum, and assessment structures and implementation (e.g., inclusive learning and teaching pedagogical development). • Supporting the development of culturally appropriate learning and cultural spaces for diverse students, including Australian Aboriginal and Torres Strait Islander students. • Monitoring, research, and equity program development activities at a more strategic level (those that are not integrated with the delivery of the HEPPP-funded service-type activities of the above three types). These could involve piloting innovations in curriculum and support services design or using data to better target HEPPP-funded projects.
Why	To improve the way educational institutions' operations and processes accommodate equity group members' backgrounds which, in turn, would lead to increases in HE access, participation and success of equity group members.

3.6 SEHEEF Student Pathway Map

A System Map was developed by Enzyme Consulting Group for DESE to support the process of designing the SEHEEF (see Appendix C). Using a stock and flow diagram approach, the system map aimed to:

- Reduce the number of primary outcome variables that need to be considered when conducting an impact evaluation by including only those key student flow rates that are known to be causally related to the outcomes of interest.
- Enhance consistency in how primary outcome variables are defined.
- Reduce the impost of new data collection upon universities.
- Help practitioners and others involved in evaluating university HEPPP-funded projects to understand the program logic that provides the rationale for their project and to choose the relevant variables to examine for evidence of the project's causal impact.

The System Map has informed a 'Student Pathway Map' (see Figure 7) developed for SEHEEF, the purpose of which is to:

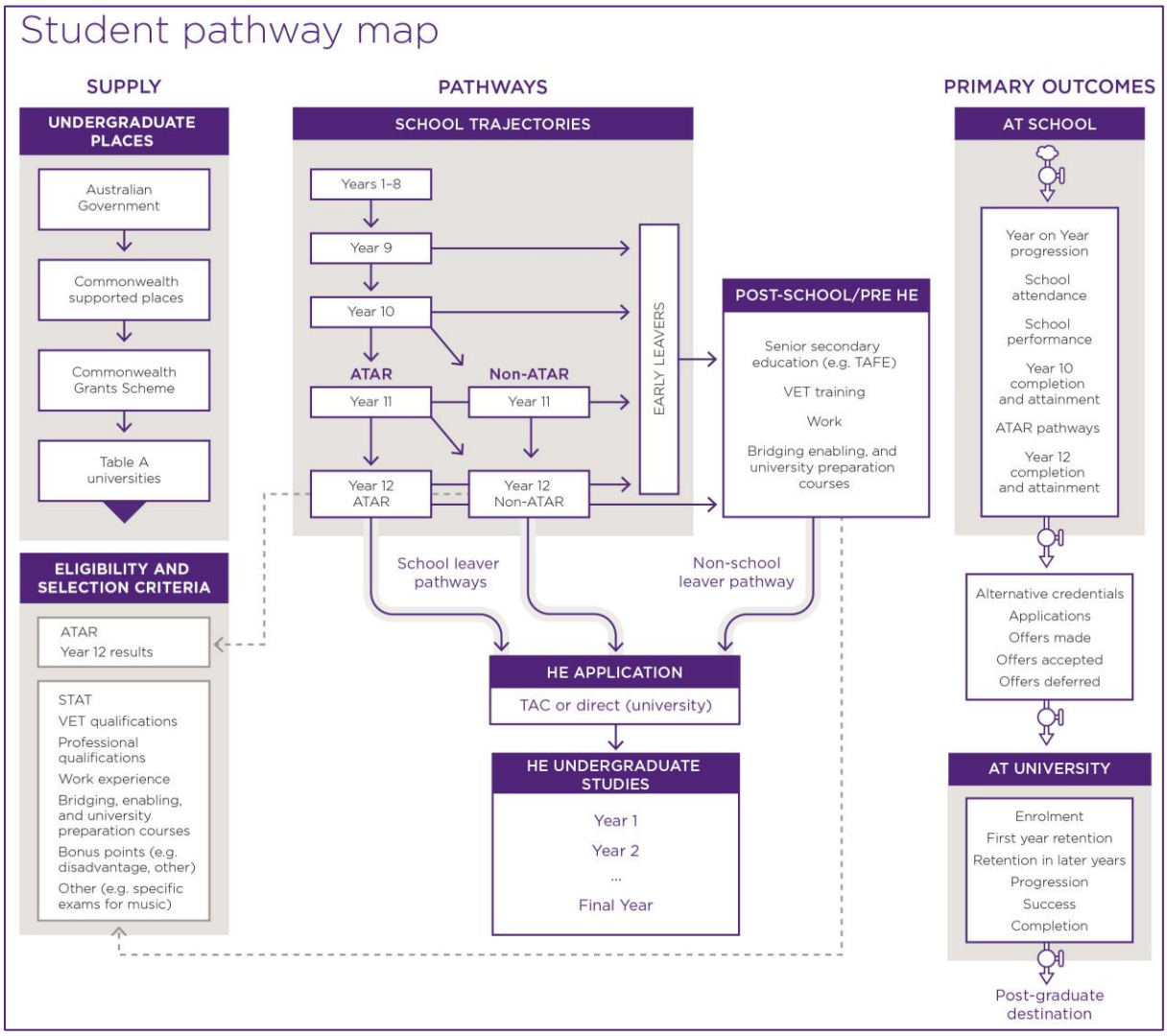
- Provide an easy-to-understand visualisation of the pathways through which students can enter university, and the eligibility and selection criteria that entry depends on.
- Provide a direct line of sight between different student pathways and outcomes included in the original System Map (developed by Enzyme Consulting Group) and the HEPPP Program Logic. These outcomes represent those that can be measured using routinely collected data and that can therefore be used for QIE (see Section 5.3.1.2).
- Extend the System Map developed by Enzyme Consulting Group to include primary and lower secondary school, and post-graduate outcomes.

As shown in Figure 7, the map provides context with regards to the supply of HE undergraduate places at Table A universities, which are funded by Commonwealth Grants scheme. Universities define eligibility and selection criteria for filling these funded places, the main aspects of which include: Australian Tertiary Admission Rank (ATAR), Year 12 results, Special Tertiary Admission Test, VET qualifications, professional qualifications, work experience, bridging courses, prep courses, bonus points (disadvantage, other), other (e.g., specific exams for music). These connect with pathways into undergraduate HE studies since student pathways need to address the eligibility criteria.

The pathways into HE studies can be considered by making a distinction between a school leaver pathway and a non-school leaver pathway.

1. **School leaver pathway.** This pathway describes those students who complete Year 12 at school and immediately enter university, either through an ATAR or non-ATAR route.
2. **Non-school leaver pathway.** This pathway describes all other pathways to university, including those who:
    - completed Year 12 with or without ATAR, but did not immediately go to university, or
    - left school before the completion of Year 12 and at a subsequent period undertook additional activities to enhance eligibility for university.

Figure 7. The Student Pathway Map for the SEHEEF (replicated in Figure 1).



The right panel of Figure 7 lists primary outcomes, which either reflect important milestones for achieving successful HE studies (in terms of educational progression, attainment and graduate destinations) or precursors of successful HE studies, which are situated in the education system (school attendance, performance, retention). All of these outcomes have been prominent in research and reporting surrounding equity issues in the Australian education system. These outcomes have been well institutionalised in administrative data collections and are considered as 'primary' outcomes for indicating the impact of HEPPP by the Australian Government.

In isolation, the Student Pathway Map (and the original System Map developed by Enzyme Consulting Group) is insufficient to articulate the pathways through which HEPPP-funded projects are likely to bring about change in the outcomes identified. This is because it does not include the initial outcomes that activities and programs are intended to influence and that support the achievement of the outcomes included in the Student Pathway Map. These are the 'supporting' outcomes that stakeholders described as the 'missing middle' (i.e., between delivery of an activity or program and

the ultimate outcomes of the HEPPP) during consultation. The continued identification and measurement of supporting outcomes remains important because:

- It helps practitioners to make the link between how the immediate outcomes of their activity/program are theorised to influence longer-term outcomes at both university and national level.
- It provides important information to explain how and why the 'primary outcomes' have been achieved.

The next section uses the components introduced thus far – Student Life Course Stages, Typology of Activities, and Student Pathway Map – to assemble a Program Logic of HEPPP.

3.7 Program Logic

The development of a HEPPP Program Logic (see Figure 8) was an important part of the development of the SEHEEF. Its purpose is to:

- map the intended relationships between HEPPP-funded activities and supporting and primary outcomes;
- identify the key assumptions and contextual external factors that could affect the HEPPP achieving its intended effects;
- facilitate mapping and synthesis of individual university activities to the primary outcomes of the HEPPP; and
- provide an organising framework to identify priorities for evaluative inquiry, helping to inform the tools and methods required to support a coordinated and robust approach to data collection at the university level (and synthesis at the national level).

A preliminary Program Logic was presented at the stakeholder consultation workshops (described in Section 2.6.1). This was revised based on the extensive feedback received and resulted in a more detailed Program Logic, with the link between activities and outcomes articulated by student life stage and activity type. The revised Program Logic also implies that the achievement of primary outcomes is unlikely to be dependent on any single activity type.

For visual clarity, the underlying assumptions in the HEPPP Program Logic, and the external factors that may affect the implementation and outcomes of HEPPP-funded activities and programs, are presented separately from the main Program Logic (See Figure 9). This should not undermine their importance as their consideration is crucial for understanding the context in which the HEPPP is being implemented at both the university and national level.

The Program Logic has application beyond informing the development of the SEHEEF. It is a tool that can be used in practice. By locating the activity type(s) and student life stage(s) that a program involves, it can provide a guide to practitioners in terms of the supporting and primary outcomes that they can expect to achieve. It is worth noting that the example and activities and supporting outcomes identified are not exhaustive, particularly for those programs that involve co-design with participants and where outcomes (or what constitutes success) may be self-determined. The primary outcomes, on the other hand, can be considered standard as they are consistent with the main objectives of the HEPPP.

Program logics designed specifically for individual HEPPP-funded programs within a university are encouraged to promote a shared understanding of how HEPPP funding will be used to design the program's activities, and the changes that are expected through their implementation. The benefits of such an approach was highlighted by Downing (2017), including ensuring a focus on outcomes among program staff, while developing an understanding of the paths from funding to those outcomes.

Figure 8. HEPPP Program Logic (replicated in Figure 2).

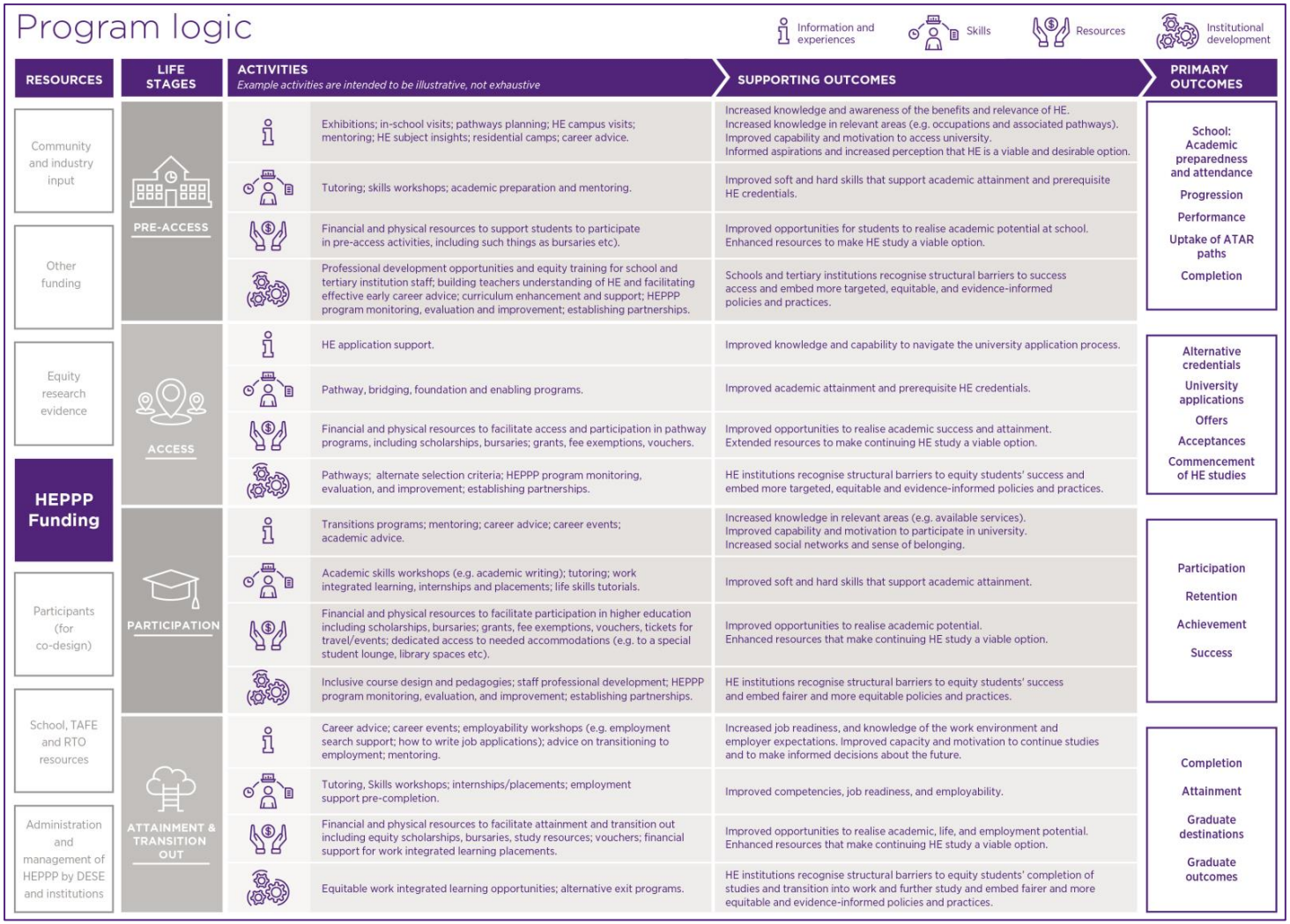


Figure 9. Program Logic Definitions and Assumptions.

ACTIVITIES - DEFINITIONS

INFORMATION AND EXPERIENCES	SKILLS	RESOURCES	INSTITUTIONAL DEVELOPMENT
Activities that primarily focus on providing information and/or related interactions/experiences	Activities that primarily focus on developing individual attributes and/or skills	Activities that provide physical goods or financial assistance to recipients in support of HEPPP objectives	Activities that primarily focus on developing institutional systems including processes, structures, cultures, values, and professional practices

ASSUMPTIONS

Staff have the skills and experience to support HE participation

HEPPP funding is being used for activities that would not have otherwise been implemented

Schools, universities and tertiary institutions have the capacity and capability to deliver HEPPP activity

Programs operate without further stigmatisation or differentiation of students or without using a deficit model

HEPPP-funded programs and activities work as intended

EXTERNAL FACTORS

Individual

Family/ caring / work responsibilities

Health and disability status

Financial implications for students of engaging with HE

Family and Community

Cultural and community norms/expectations

Availability of community support services

Social costs of relocation

Institutional

Higher Education policies, priorities and funding

Impact of other HEPPP and non-HEPPP funded programs

Institutional resource allocation

Availability and capacity of partner organisations to contribute to HEPPP activities

Societal

Other social and economic factors (e.g. labour market trends) and unforseen adverse events

The University Of Queensland
AUSTRALIA
CREATE CHANGE

Institute for
Social Science Research

PART 2 : The Evaluation Framework

DESIGN AND IMPLEMENTATION

4. The SEHEEF: An Overview

- The SEHEEF is depicted in a visual which offers:
  - simplicity to promote widespread use and understanding within the sector, and
  - clarity of the key components at the university level and the national level.
- The final SEHEEF design was informed by the foundational work and consultations from Work Packages 1 and 2, feedback from the Department, as well as post-webinar survey feedback from the sector as part of Work Package 3.
- The university-level activities of the SEHEEF are segmented into Continuous Quality Improvement (CQI) and Impact Evaluation (encompassing Quantitative Impact Evaluation (QIE) and Theory-based Impact Evaluation (TBIE)).
- National level evaluation includes routine reporting of program and equity data; advanced analysis of program and equity data; and the synthesis of university-level quantitative and TBIE findings.

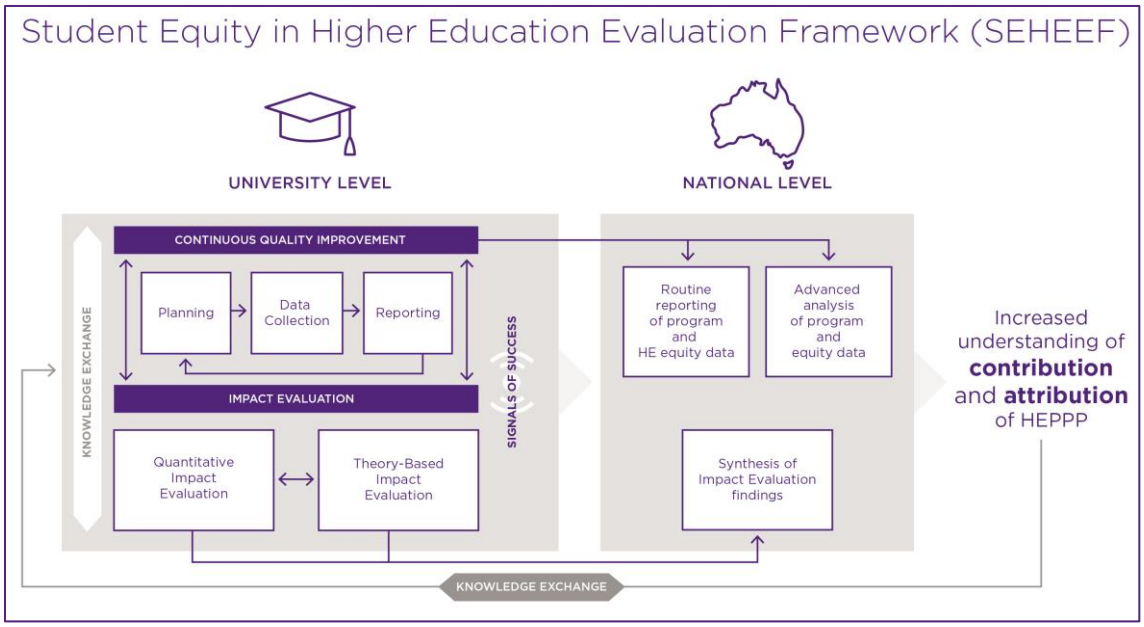
4.1 Chapter Introduction and Outline

This chapter provides an overview of the structure of the SEHEEF, including an introduction of the main components of the framework. The SEHEEF is built upon the foundation components described in Chapter 3, devised from the rapid literature review and extensive stakeholder consultations. The purpose of this chapter is to briefly introduce the SEHEEF and its key elements, whilst the subsequent chapters 5 and 6 will provide more in-depth and technical explanations of the various components.

4.2 SEHEEF Overview

Figure 10 provides an overview of the SEHEEF. The visual intends to be simple enough to facilitate widespread use and understanding, while capturing the core components that form the basis of the SEHEEF. It shows a clear delineation between evaluation activities to be delivered at the university level and those to be delivered at the level of the Australian Government. University level activities are segmented into CQI (discussed in Section 5.2 and Impact Evaluation (discussed in 5.3), encompassing both QIE and TBIE. National level activities involve routine reporting of equity data, as well as reporting and analysis of sector level data on HEPPP programs, and the synthesis of Impact Evaluations conducted at the university level (discussed further in Chapter 6). Figure 10 shows how university and national activities must be linked to enable a comprehensive evaluation of the national HEPPP.

Figure 10. The SEHEEF Overview.



4.2.1 University Level

At the university level, evaluation activities are divided into two main categories: CQI and Impact Evaluation (consisting of QIE and TBIE). CQI includes activities that aim to improve routine data collection, planning, progress monitoring, and reporting. Different quantitative and qualitative data collection methods can be applied as part of CQI, but these are characterised as being non-onerous and non-specialised. Data collection and reporting for CQI is mostly at the activity level and is expected to be performed by staff delivering HEPPP-funded equity programs.

The second category of evaluation activities at the university level is Impact Evaluation, which is subdivided into two related components: QIE and TBIE. These specialised forms of evaluation are performed at the program level and require high levels of evaluation expertise. For instance, this form of evaluation could be conducted by researchers with appropriate expertise, based at either the same or a different university. However, as noted by stakeholders who commented on the preliminary Evaluation Framework (see Chapter 7 for the full findings from the consultation), such specialist expertise will only be maximised if the perspectives of those responsible for planning, managing, and delivering the programs are incorporated in the evaluation design. For this reason, the evaluation team should be working closely with the teams of practitioners involved in the programs being evaluated.

QIE refers to the use of quantitative methods to measure the change in an outcome that is attributable to a HEPPP-funded program is based on a credible and rigorously defined counterfactual (Section 5.3.1.1). The link between CQI Data Collection and QIE highlights that the collection of data at the activity level can inform QIE if participation in a program can be linked to subsequent primary outcomes.

For Impact Evaluations to support causal attribution, it is not only important to understand the effects of a cause (often the focus of quantitative studies), but also the causes of an effect (often the focus of qualitative studies). This is consistent with the view that knowing that impacts have happened because of an equity project is insufficient; to be able to learn from Impact Evaluations and apply them to other contexts, an understanding of how and why the results have been achieved is also required (Coryn et al., 2010).

TBIE methods tend to be particularly suited for the evaluation of complex interventions or interventions implemented in complex environments (Craig et al., 2008) and include Realist Evaluation and Contribution Analysis. These approaches are method-neutral, but usually rely heavily on qualitative methods. TBIE not only answer questions about whether the intervention

has caused an effect, but how and why the effect occurred, how context may have influenced outcomes, and to what extent results are generalizable. They enable assessment of a program's contribution to intended and unintended outcomes and, if incorporating or used alongside a QIE, can strengthen causal attribution.

A summary of the distinction between CQI, QIE and TBIE is provided in Table 8, with a fuller description of the application of these in the context of the SEHEEF provided in Chapter 5. This distinction is helpful because it has previously been reported that there is ambiguity among the HE sector about what constitutes evaluation and how it differs from other activities such as monitoring and performance management (de Vries, 2018; Smith et al., 2018). While evaluation is often used as an umbrella term that can capture approaches that by themselves cannot answer evaluative questions, the distinction here aims to promote a consistency in language with regards to HEPPP-funded equity projects.

Table 8. Distinguishing between the Key SEHEEF Components at the University Level.

CQI	QIE	TBIE
• Regular and timely using data gathered routinely or readily obtainable by program staff in real-time to inform small, iterative changes.	• Infrequent, discrete and usually conducted by evaluation specialists to inform substantive decisions.	• Infrequent, discrete and usually conducted by evaluation specialists to inform substantive decisions.
• Usually focussed on activities and outputs, although indicators of outcomes can also sometimes be used.	• Focused on primary outcomes at the student level using administrative data.	• Focused on a wide range of outcomes at different system levels (student, family community, institutional).
• Cannot indicate causality.	• Specifically focused on attributing a particular effect to a particular cause.	• Focused on assessing the contribution that a program makes to multiple effects.
• Enables internal and external staff to assess if objectives are being met so useful for compliance and accountability purposes. Difficult to use by itself for assessing impact, but can inform impact evaluation by providing information needed to understand why a particular change has come about.	• Provides a robust estimate of the impact of a program compared with a counterfactual using quantitative methods. Addresses *what* questions.	• Provides multiple lines of evidence using different methods to understand what works, for whom, and in what circumstances. Addresses *how and why* questions by placing high importance on context.
• Primarily conducted at the activity level across most programs.	• Conducted at the program level for a selection of programs.	• Conducted at the program level for a selection of programs.
• Relatively low cost so funding is typically budgeted for within the program's operating budget.	• Resource- and time-intensive so must be purposefully budgeted for.	• Resource- and time-intensive so must be purposefully budgeted for.
• Involves data collection tools that allow simple recording and reporting of information.	• Involves complex data analysis and interpretation.	• Involves methods of data collection and synthesis that require high levels of expertise.

Adapted from Fraser Health (2014); Hatry (2013); Perrin (2012).

To encourage transparency and to promote learning, it is proposed that the routine reporting of findings from CQI and Impact Evaluations, as well as the experience of delivering/managing them, are shared across the sector through knowledge exchange opportunities (e.g. communities of practice; annual seminars/conferences). This is discussed in Section 6.6. Transparent dissemination will enhance evaluation confidence and capability across the sector, as well as identifying successes and challenges to the Australian Government.

4.2.2 National Level

At the national level, routine reporting of equity data should continue (DESE, 2020a), but can be complemented with sector level data on the number, reach and characteristics of HEPPP funded activities. This will be enabled through the collection of a minimum level of data by universities. Opportunities for advanced analysis of sector-level data should also be explored and exploited, including use of the WPLS data and the linkage of university datasets to other national administrative datasets (see Section 6.4.3).

Synthesis of the Impact Evaluations conducted at the university level, using either quantitative estimates from the QIE or through other synthesis methods (e.g. meta-evaluation of TBIE) will enable accumulation and aggregation of program-level findings.

Collectively, this approach will provide the Australian Government with the evidence needed for triangulation to determine both the contribution and attribution of HEPPP to student equity outcomes. In the spirit of transparency and continuous improvement, the SEHEEF proposes that these synthesised findings are reported back to the university sector to inform future program design and delivery.

5. University Level Evaluation of HEPPP-funded Programs and Activities

- This chapter distinguishes the different evaluation components of the SEHEEF for equity programs delivered by universities.

  Continuous Quality Improvement (CQI):

  - aims to improve the design, implementation and performance of activities and programs;
  - involves a 3-staged process of planning, data collection and reporting;
  - offers a consistent and streamlined approach to planning and reporting, while enhancing the potential for impact evaluation and sector-wide data aggregation, and
  - can reduce the burden on universities, while also offering better alignment to subsequent progress reporting requirements.

  Quantitative Impact Evaluations (QIE):

  - aim to produce robust estimates of the impact of a program on target beneficiaries;
  - compare outcomes in the group receiving an intervention to a so-called counterfactual, a control group that did not receive the intervention, and
  - have the benefit of providing rigorous estimates of how much of an observed outcome(s) can be attributed to a program or the average additional or net change caused by the program.

  Theory-based Impact Evaluations (TBIE):

  - map out the causal chain from a program's inputs to outcomes, recognising that the program is likely to be a 'contributory cause'. This contrasts with the attribution framing inherent in QIE approaches.
  - Offer enhanced insights into what works, for whom, in what circumstances, how and why, helping assess if the program is likely to work in other contexts.

- Further, this chapter discusses the benefit of capturing information on HEPPP participants in a standardised way.
  - This would enable consistency across the sector.
  - Sharing this information with the Government as part of routine data transfers between the universities and the Department would enable for the information to be analysed at a national level, with the outcomes of these analyses shared with the sector.

5.1 Chapter Introduction and Outline

In the absence of a national Evaluation Framework, evaluation of equity projects has been understood and undertaken in different ways within and between HEPPP-funded universities. This is apparent in the diversity of findings included in the annual HEPPP (progress) reports analysed for this project (see Section 2.6.4). Often, a lot of information is submitted; yet, it can be difficult to fully understand the methods used to obtain the information and, in turn, to assess its rigour. Furthermore, there is often an emphasis on describing what was done, with fewer insights into the impact of what was done on intended (and unintended) program outcomes. When supporting outcomes are explored, this is typically done through the use of retrospective or pre-post surveys and qualitative interviews or focus groups. While these approaches are useful and important for monitoring and continuous quality improvement, they are often insufficient to enable robust evaluative judgments of impact to be made, or for identifying the reasons why intended changes have or have not taken place.

The purpose of this chapter is to provide a clearer distinction of the different evaluation components that need to be understood and implemented by universities in receipt of HEPPP funding, in order to:

- Improve the level of consistency in how the evaluation of HEPPP-funded activities is understood, described, and implemented within and across universities;
- Maximise the usefulness of data collected by equity program practitioners;
- Embed evaluative thinking within the sector, highlighting the critical role of program staff in collecting data and recording their observations and experiences;
- Explain how the collection of data at the activity level informs and complements other evaluation components at the university and national level; and
- Support the use of in-depth impact evaluation to strengthen understanding what works, for whom, in what circumstances, how and why.

As was outlined in Section 4.2.1, the SEHEEF considers two major components at the level of individual universities: CQI and Impact Evaluation (also see the left-hand side of Figure 10). CQI is discussed in more detail next in Section 5.2. As part of this discussion, data collection and reporting requirements have been operationalised into pragmatic tools. All tools, including those with populated examples, are available in an accompanying Appendix, entitled *SEHEEF Tools*. Section 5.3 elaborates on Impact Evaluation at the university level, including QIE (Section 5.3.1) and TBIE (Section 5.3.2). It also includes a discussion of the prioritisation of projects for Impact Evaluation (see Section 5.3.3) and the registration of projects that have been selected for Impact Evaluation (see Section 5.3.4). The discussion in this chapter integrates the insights obtained in foundations for the SEHEEF described in Chapter 3, and the existing and emerging data landscape and how it can be used to support evaluation, described in Section 5.3.1.2.

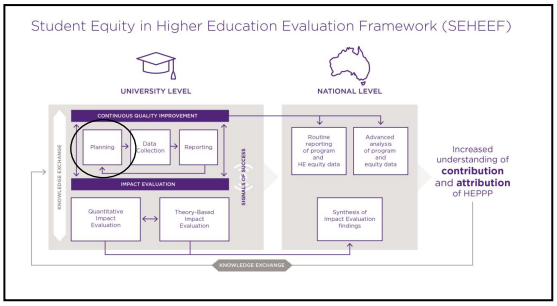
5.2 CQI

> *To improve equity outcomes, we need better reporting of data, better analysis of broader datasets and better communication of the outcomes of data analysis to all stakeholders*
>
> Brett (2018, p8)

As part of the SEHEEF, it may be expected that the CQI activities will be undertaken by universities across all of their HEPPP-funded programs. CQI aims to improve the design, implementation and performance of activities and programs. At the University level, systematic CQI can be applied through consistent approaches to data collection, planning, and reporting, and an appreciation of the key initial outcomes that program activities are intending to achieve (i.e., supporting outcomes). It can

focus on those aspects of program performance typically assessed in a process evaluation (e.g., participant reach; acceptability of the program to participants; enablers and barriers to implementation), but also on the non-causal assessment of the effect of a HEPPP-funded program on initial outcomes. These are important activities in their own right, but should also be designed to contribute essential data and information to enable and/or complement more specialised evaluation approaches (Hunter & Nielsen, 2013; Perrin, 2012; Rogers, 2012).

5.2.1 Planning



Good planning is central to good evaluation. Evaluation must be comprehensively planned for and supported across multiple levels of the HE system if it is to inform and improve policy and practice. The intended outcomes, along with the activities that will help these outcomes to be achieved, must be well understood at the outset of a program.

At present, universities receiving HEPPP-funding are required to submit annual Access and Participation Plans which '*outline the institution's suite of strategies for increasing access, participation and success for people from low socioeconomic status backgrounds*.' (DESE, 2021). It is stipulated that the Access and Participation Plans should contain brief descriptions under the following topics:

- **Equity outcomes**: the achievements the university has planned for students from a low socio-economic status (SES) background.
- **Strategies**: the strategies the university will undertake to support attainment of the equity outcomes.
- **Key activities**: which will deliver an increase in the access, participation and success of people from a low SES background.
- **Evaluation**: how the university plans to evaluate the effectiveness of the equity strategies.
- **Partnerships and collaboration**: who the university will partner and collaborate with and how this will improve equity performance.

For the purposes of this project, an analysis of the 2020 Access and Participation Plans was conducted (see Section 2.6.4). There were some excellent examples of plans that provided succinct, but instructive, information on the programs and activities that would be delivered using HEPPP funding, the short-and longer-term outcomes that these would achieve, indicators of these outcomes, and methods to measure them. These have informed various aspects of the approach proposed below. However, these were the exception rather than the norm. Common issues were identified that constrained the usefulness of the plans. The most common issues are summarised in Table 9. It should be noted that some of these issues are likely to reflect the high-level nature of the guidance of the information required.

Table 9. Common issues identified in 2020 HEPPP Access and Participation Plans.

Topic	Issue
Evaluation plans	The description of evaluation plans was often vague and non-specific (e.g., 'activities will be evaluated using a range of quantitative and qualitative methods'). It was not clear how specific activities would be evaluated and there was a lack of distinction between different evaluation approaches (e.g., performance measurement, impact evaluation). Few plans distinguished between evaluating against short-term and longer-term outcomes.
Resources	Few plans specified the resources that would be required for the programs/activities to be designed and/or delivered.
Program/activities	There was a lack of specific information on the activities that would be delivered as part of the HEPPP-funded programs. This made it hard to fully understand what delivery of the programs would look like in practice.
Outcomes	Outcomes often related to the primary outcomes of the HEPPP without stipulating the shorter-term outcomes of activities required to achieve these. Outcomes were rarely accompanied with relevant indicators.
Level of detail	Plans included varying levels of detail (ranging from 2 to >10 pages in length) and designs.

The SEHEEF provides an opportunity to improve how planning of CQI is reported by universities and to better align it with other HEPPP reporting requirements. A range of frameworks and approaches can be used to monitor the progress and performance of public service programs. For the CQI component of the SEHEEF, an approach known as Results Based Accountability (RBA™) provides a useful framing (Friedman, 2009). RBA™ is a quality improvement approach that makes a distinction between population and performance accountability. Population accountability is concerned with outcomes of whole populations, such as communities, cities, countries, states, and nations. As such, it cannot be assigned to any individual or organisation. Performance accountability, on the other hand, is focused on the program or activity level and can therefore be assigned to those responsible for program design and delivery.

The application of RBA™ to the CQI component of the SEHEEF involves embedding three main questions (referred to as 'performance measures' in RBA™) into planning and reporting mechanisms (Table 10).

Table 10. The Three 'Performance Measure' Questions embedded within CQI Planning and Reporting.

How much did we do?	Example measures: number of participants taking part in HEPPP-funded activities (including by equity group); number of HEPPP-funded activities delivered (including by student life stage).
How well did we do it?	Example measures: participant satisfaction with activities, attendance rates, stakeholder perception of HEPPP-funded activities.
What outcomes did we achieve?[9]	Example measures: changes in skills, knowledge, attitude, confidence, institutional policy and practice.

[9] The original RBA™ wording is "Is anyone better off?" The wording has been deliberately amended in the SEHEEF to make it relevant to changes observed at the institutional. Note also that this is not a causal question; in other words, while it intends to produce answers that demonstrate and measure results, it does not require stringent evaluation designs to show that the project *caused* these results.

RBA™ presents a useful and appropriate approach to CQI for the SEHEEF for several reasons:

- The approach aligns well with the conceptualisation of the HEPPP Program Logic and the distinction between supporting and primary outcomes.
- It is a 'doable, reliable and useful' (Wong et al., 2015) approach based on clear and accessible language, which can help to facilitate structured measurement, reporting, communication, and learning. This in turn, can build capability, confidence, and evaluative thinking among practitioners.
- The RBA™ framework of performance measures enable flexibility in the data collection methods used to evidence the performance measures. Such flexibility increases the likelihood that a manageable and meaningful process of data collection and reporting can be agreed, cognisant of available staff capacity and capabilities, and financial resources.
- The RBA™ approach is used as the basis of the performance reporting requirements of an increasing number of public funding bodies across Australia, including in the education sector (Early Childhood Education and Care, 2018).

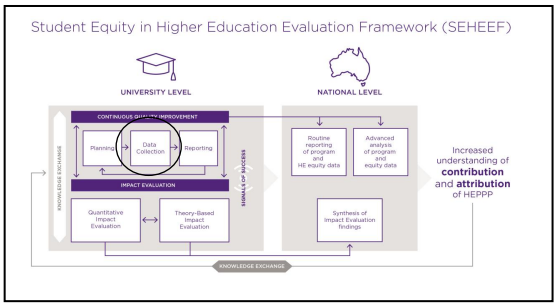
Establishing clear, unambiguous and measurable objectives, as well as ensuring appropriate alignment between these objectives and data collection methods was highlighted as essential by (Naylor, 2015) in *Understanding Evaluation for Equity Programs: A guide to effective program evaluation*. The CQI Planning Tool could be used and submitted by universities. Such a standardised approach to CQI planning presents multiple benefits:

- ensuring there is a clearer articulation of what programs will do, who they will affect, and what outcomes they intend to achieve;
- ensuring that CQI planning is considered alongside program planning, defining data requirements for performance measurement and data collection methods;
- providing DESE with a tool that enables a streamlined process for identifying what universities are planning to deliver and how they intend to collect information to inform CQI within those plans;
- providing universities with a systematic, consistent, and logical tool that is informed by (and links to) other components in the SEHEEF, thereby helping to embed evaluative thinking;
- aligning plans with CQI reporting, supporting improved accountability;
- reducing the burden on universities, while also offering better alignment to subsequent progress reporting requirements.

An unintended consequence of a more harmonised approach is that it may be perceived by universities to stifle institutional autonomy and creativity in how they set out their plans. As highlighted in Table 9 (on page 70), there were multiple examples of 2020 Access and Participation Plans that were creatively designed and provided a comprehensive level of detail. The value-add of the CQI Planning Tool is that it distils the key information and places it alongside plans for measuring performance.

Another consideration in the use of a planning tool to record intended outcomes is that some programs may encourage participants to identify outcomes. In other words, the participants decide what constitutes success for them. This process can be noted in the Planning Tool, with findings and reflections reported through the CQI Annual Reporting Tool (see Section 5.2.3).

5.2.2 Data Collection



Data collection refers to the process of collecting, analysing and/or reporting information regarding the performance of activities and programs. This involves collecting data against a system of indicators about project costs, number, reach, appropriateness, and supporting outcomes.

It is an internal activity designed to maximise transparency and accountability, providing the information deemed necessary to demonstrate that public funds are making a difference and delivering on government objectives (Public Governance, Performance and Accountability Act 2013, Australian Government, 2013). It is also a critical tool for continuous learning and improvement.

As highlighted by (Brett, 2018, p7), "*the collection of the right data is a critical enabler of transparency and accountability for equity in higher education".* In addition to accountability, the collection of data in a systematic, non-onerous, and consistent way helps to streamline the process of aggregating data and also provides opportunities for more specialised evaluation (Perrin, 2012; Rogers, 2012; Wilkins & de Vries, 2014). This applies at the university level when aggregating data across programs, and at the sector level when aggregating data across universities. Such a 'data pipeline' provides a clear line of sight of data being collected on the ground and to reporting at a sector-wide level. This is important as it can help to motivate program staff and other stakeholders by increasing transparency about why data is being collected and how it will be used (Perrin, 2012). Indeed, consistent with previous HE Equity literature, this was raised as an area for improvement during SEHEEF stakeholder consultation activities.

Ensuring consistency in the minimum data that is collected by universities will help to:

- Facilitate the collection of standardised data across HEPPP-funded projects, thereby enabling robust aggregation and subsequent reporting to DESE;
- Enable the data submitted by universities on the number, reach and characteristics of HEPPP-funded programs to be aggregated by DESE and reported at the sector level, and
- Provide a mechanism to 'flag' participants who have participated in HEPPP-funded projects and link them to relevant and available primary outcome data for QIE (see Section 6.4.2 for more details).

By facilitating such an approach, the SEHEEF is consistent with the ANAO Program Evaluation in the Australian Public Service Guidelines (The Auditor-General, 1997) , which recommends that '*as far as possible, programs and activities have a core set of performance information that meets multiple purposes; at a minimum, performance information for such purposes is consistent and complementary'* (p.84).

5.2.2.1 Common data collection methods

Staff involved in HEPPP-funded projects routinely employ various methods to collect data on its effect on supporting outcomes. This is mostly done at the activity level through the use of the following quantitative and qualitative methods: participant surveys (including pre- and post-activity); feedback forms; interviews; focus groups; and tracking of student retention, performance, and other academic outcomes (ACIL Allen Consulting, 2017; Bennett et al., 2015; de Vries, 2018). These methods are typically designed and delivered by practitioners, helping them to:

- Understand whether the immediate intended outcomes of an activity are being achieved;
- Explore whether participants are finding the activities useful and appropriate, and why;

- Provide feedback to the Department in their annual Progress Reports, and
- Collect evidence to inform minor changes to the design and delivery of an activity and to better understand what features of the activity participants found useful or otherwise.

Such methods remain an important part of the CQI component of the SEHEEF as they provide the information need to respond to the RBA™ performance measures of: *How well did we do it?* and *What outcomes did we achieve?* As indicated in Table 10, they can also provide useful contextual information to inform Impact Evaluations (see Section 5.3 for more detail). However, as stand-alone data collection methods, without either being specifically designed to enable comparisons with those who haven't participated in an activity or being designed as one part of a multi-pronged evaluation approach informed by a clearly defined theory of change at the program level, they are limited in their ability to enable a robust and comprehensive assessment of impact, particularly in relation to primary outcomes. Table 11 provides illustrative examples of indicators and data collection methods that could be used for each activity type against the RBA™ performance accountability measures. The next section considers how the collection of data on individuals participating in those programs could support evaluation.

Table 11. Example Indicators and Data Collection Methods when applying the RBA™ Approach for CQI of HEPPP-Funded Activities.

	How much did we do?	How well did we do it?	What outcomes did we achieve?
Information and experiences	• Number and reach of HE campus visits • Number and reach of information sessions with parents/carers • Number of current students taking part in mentoring	• Participants' feedback on quality, appropriateness, and usefulness of the information-based activity • Stakeholder feedback on how well the activity was delivered	• Changes in participant's levels of: - knowledge and awareness of HE and career pathways - knowledge of available student support services - perception that HE is a viable and desirable option
Skills and attainment	• Number and reach of skills-based workshops • Number and reach of revision sessions	• Participants' feedback on workshop quality, appropriateness, and usefulness • % of participants who completed all sessions (for multi-session activities)	• Changes in participant's levels of: - confidence, self-efficacy, communication skills - academic ability - credentials to access HE studies
Resources	• Number of scholarships available • Number and nature of other resources made available (e.g. bursaries, free resources, vouchers	• % of participants who agree that additional resources were sufficient to fully participate in university • % of students from equity groups who believe that additional resources are there for them if they need them	• Number of scholarships awarded to students in equity groups • Take-up of available resources by students in equity groups

	How much did we do?	How well did we do it?	What outcomes did we achieve?
Institutional development	• Number and reach of staff development sessions on equity / inclusive teaching practice • Number and type of alternative pathways into university that are offered • Number of industry partners willing to place students	• Awareness among stakeholder groups of available entry programs • Student feedback on cultural appropriateness of course design and teaching	• Change in levels of understanding of structural barriers to equity students' success • Change in number of teachers/lecturers reporting more equitable teaching practice
Data sources / methods	• University HEPPP admin data	• Participant surveys, interviews and focus groups • Stakeholder surveys and interviews	• Participant surveys, interviews and focus groups • University admin data Staff surveys and interviews

5.2.2.2 Capturing HEPPP participation information

One crucial piece of information required to support ongoing performance monitoring, as well as more specialised impact evaluations of specific programs involves collecting data at an individual level about participation in those programs. Based on the consultations undertaken as a part of the project and the review of HEPPP Annual Progress reports, it is evident that currently there is no consistency across the sector in terms of collecting such data. Specifically, there is no standardised recording of participation in HEPPP-funded activities at an individual level across universities, or even across different projects within individual universities.

Individual universities run their own processes for distributing the HEPPP funding. Internal data collection and reporting requirements vary depending on university, and on the characteristics of the program, such as its size (in terms of the number of participants) or the amount of HEPPP funding allocated. For small programs and for one-off activities, sometimes no systematic data collection on participants would be undertaken, beyond what is required for standard HEPPP reporting. Larger programs would typically collect some data on the participants. However, the format of this data will vary across different programs within an individual university (and across universities).

Furthermore, even if collected, the way in which the data on HEPPP-funded projects and their participants is stored, processed and utilised vary markedly across universities. Some universities operate well-integrated data processes coordinated by central hubs that collect, process and analyse all HEPPP-related information, including individual-level participant data. In those cases, individual-level information on HEPPP participants might be integrated with other data collected by universities on their students. However, in other universities data on HEPPP projects and their participants would often be collected and stored locally in the organisational units within universities that are responsible for running those projects. In such cases, the central data systems would not capture the information about HEPPP participants, except where such information is relevant for administrative or operational functions, such as scholarship payments.

The lack of standardised data on HEPPP participants applies across the student life course. In principle, such data should be relatively straightforward for universities to incorporate into their routine

data collections for projects operating at the Participation/Attainment and Transition Out stages, since these projects target current students. However, as noted earlier, the extent to which this occurs varies markedly across universities and some universities might have less capacity, particularly over the short term, to integrate individual HEPPP participant data with other data collected centrally on their students.

Additional challenges relate to capturing the information on activities delivered in the Pre-Access/Access stages, including outreach activities, as these involve individuals who are not currently university students. As such, specialised data collection would need to be undertaken and the data from such collection would not be easily integrated into university standard databases. Furthermore, the nature of some of the activities delivered at the Pre-Access stage (e.g., outreach activities delivered to whole schools, career fairs etc) will make capturing individual-level data on participants very difficult or indeed impossible.

While some of the data on participants in programs and activities delivered at the Pre-Access and Access stages is being recorded by universities, the content and format of this data will vary extensively between programs within and across universities. While standardising this data would require a major sector-wide effort, the HEAT in the UK offers a model for designing a potential solution (see Box 8 for more details). However, the model would need to be adjusted and further tailored to the Australian HE context, taking into account the diversity of equity programs and activities. For instance, tracking participants in one-off activities or those targeting large groups of individuals (e.g., career fairs) might be neither feasible nor desirable. In such instances, more tiered or selective approaches such as those focusing on participants in high-intensity programs only should also be considered. While HEAT does offer such a tiered model of data collection, it would need to be fine-tuned in the Australian context. The point about feasibility of capturing participant information at the Pre-Access/Access stages was raised as an important issue by stakeholders in the consultations on the preliminary Evaluation Framework (see Chapter 7 for the findings).

Box 8. The HEAT

About the HEAT

The HEAT service provides solutions for evaluating widening participation outreach programmes. It was collectively developed by member institutions and currently incorporates 91 universities as core members who participate in the decision making. There are, however, other tiers of membership allowing smaller HE institutions and non-profit outreach providers to access the service.

HEAT is responsible for data management, analysis and reporting of all aspects of outreach activities for participating institutions. Outreach participant data collection and tracking is the key activity. HEAT provides infrastructure for recording student details and their involvement in widening participation activities. The information on activities and their participants come from the member institutions. They provide the information to evaluate their activities, but the records become a part of a central database, and which can be used in further analysis. In addition, HEAT cooperates with government agencies such as the Office for Students, the Department for Education and data custodians, including the Higher Education Statistics Agency. Due to this cooperation, it can link gathered information with data, mostly administrative, on outcomes.

The HEAT Database comprises three main types of information about institutions, activities, and students. The activities include taster days, masterclasses, mentoring, assemblies, and residential. In turn, students' characteristics include variables such as first and last name, gender, postcode, and educational history. Linked datasets provide information on final stages of education provided by the Department for Education, university applications provided by The Universities and Colleges Admissions Service, access to HE, progress through HE, postgraduate education, and employment destinations provided by the Higher Education Statistics Authority.

HEAT prepares Annual Track Reports describing the outcomes of outreach activities' participants. These reports are generated both for aggregated data from all participating institutions and for individual institutions. Furthermore, the data are utilised in thematic reports focusing on particular outreach aspects (e.g., outreach in Rural and Coastal areas).

As well as data collection and reporting, HEAT offers a collection of services that facilitate the evaluation process. These include data tools such as a duplicate checker or data cleaning tools. Members can also use student and postcode profilers, an evaluation tool for creating evaluation plans integrated into the database, or a survey tool that allows running surveys that can be linked to participant and activity data.

Capturing information on HEPPP participants in a standardised way would ensure consistency across the sector and would enable sharing this information with the Government as part of routine data transfers between the universities and the Department. This would, in turn, enable for the information to be analysed at a national level, with the outcomes of these analyses shared with the sector (see Section 6.4). A process would need to be established for routine collection of such information, and relevant privacy and ethical considerations would need to be undertaken, as outlined in Section 6.4.3.1 further in the report. However, collecting such data would have considerable benefits in terms of the ability to rigorously establish impacts of the HEPPP and HEPPP-funded programs on relevant outcomes. The following section outlines the proposed structure for capturing such information in a standardised way.

5.2.2.3 Proposed data structure for capturing HEPPP participant information

The information on participation in HEPPP-funded activities should be stored in multiple tables, similarly to information captured in the Departmental data collections (HEIMS/TCSI). In existing HEIMS extracts, a row often represents a single event or episode in the student's educational trajectory. For example, a row might represent an enrolment in a given course in a given reporting period (such as term or academic year). In addition, the enrolment record might be accompanied by characteristics of this particular enrolment. This means that a typical student will appear multiple times in the dataset as most individuals need to enrol in multiple years to complete their degrees. When information on student load is exported, a student will appear even more times in such data as a row represents each unit of study. The columns in this amalgamated data might include data on the unit's status (pass, fail), load expressed as full-time equivalent, etc.

It is advisable to store information about participation in equity programs in at least two tables. The first would comprise records of participation (i.e., who took part in which activities or programs). It would be a list of elements that represent student-program (or student-activity combinations), which could also include characteristics specific to the individual experience of participation (e.g., information when and where a particular student took part in the program).

A separate dataset would consist of records of programs, which do not vary depending on the participant (e.g., the name of the institution delivering the activity, the type of activity). Crucially, this dataset would assign individual IDs (unique within each institution) to each HEPPP-funded program and activity. This ID would then be used to link individual participants to individual programs/activities. Depending on the scope of collected data, it might make sense to create 'dictionaries' to avoid data redundancies – such as separate tables for programs and activities. An example of such a data set capturing standardised information about programs and the activities covered under programs is presented in the next section, and referred to as the Program Data Reporting Tool (see Section 5.2.3).

Such a multi-table format is a common practice. It is more efficient and flexible than a single table model. Data can be organised and collapsed in multiple ways enabling various types of analysis. The format also minimises the burden on staff entering the data as it does not require entering/repeating all details about a specific program/activity for each individual person that participates in these programs/activities.

Examples of tables at the program and activity level capturing information about HEPPP participants are shown below (see Table 12 & Table 13). Table 12 shows the minimum information that would be required to be collected across program participants, which is identifying, for each student, the programs in which they participated. For instance, students with IDs 0000001, 0000003 and 0000005 participated in two HEPPP-funded programs, Program A and Program B, while the other students only participated in one of these programs. It is worth noting that the same information could also be collected via similar tables organised by program (with a unique Program ID assigned by each university), and listing students (with their unique IDs) as rows within each program.

Table 12. Data Table: Individual Level HEPPP Participant Data (linking to programs)

Student ID (unique)	***Program ID (unique)***	***Program name***
0000001	01	Program A
0000001	02	Program B
0000002	01	Program A
0000003	01	Program A
0000004	01	Program A
0000005	01	Program A
0000005	02	Program B
0000006	02	Program B

Extensions to the basic data collection model outlined in Table 12, could include collecting additional information about the nature of participation in a given program for each participant. For instance, a more sophisticated model could distinguish between individuals who fully participated in the program (i.e. all activities within a program) from those who participated only partially (e.g. selected activities).

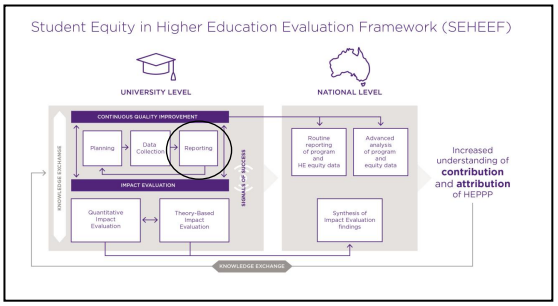
Another extension to the basic model would involve capturing data for each participant, for each specific activity they participated within a program, rather than an overall program level. An example of such system is presented in Table 13. In addition to the program level information, as captured in Table 12, this extended system would record participation with individual activities (with unique activity IDs assigned by universities). As an example, student 0000001 participated in two different activities under Program A, while student 0000005 participated in two activities under two different programs A and B. Similar to the program-level data capture system, this model can be further extended by capturing, for each individual, additional information about participation in a given activity, e.g. whether they fully participated (i.e. all mentoring sessions that form an activity) or only partially participated (e.g. only one of a number of mentoring sessions offered).

Table 13. Data Table: Individual Level HEPPP Participant Data (linking to activities)

Student ID (unique)	Program ID (unique)	Program name	Activity ID (unique)	Activity name	Activity type
0000001	01	Prog A	0101	Mentor	Info
0000001	01	Prog A	0102	Scholar	Resources
0000001	02	Prog B	0201	Employ	Skills
0000002	01	Prog A	0102	Scholar	Resources
0000003	01	Prog A	0101	Mentor	Info
0000004	01	Prog A	0102	Scholar	Resources
0000005	01	Prog A	0102	Scholar	Resources
0000005	02	Prog B	0201	Employ	Skills
0000006	02	Prog B	0201	Employ	Skills

Capturing the HEPPP participation information will be easier at the Participation/Attainment and Transition Out stages, compared with the Pre-Access and Access stages, as it involves programs and activities that target current HE students (i.e., those who are already captured in university data systems). While some universities might already be collecting data on equity program participation, capturing this data in a standardised fashion would enable consistency across the sector. Sharing this information with the Department as part of routine data transfers between the universities and the Department would further enable for the information to be analysed at a national level, with the outcomes of these analyses shared with the sector (see Chapter 6). Future extensions could include capturing information on equity program participation at the Pre-Access and Access stages. However, this would involve setting up a dedicated system akin to the HEAT model described in Box 8 above (see page 76) since it would require capturing data on the broader population of participants in equity programs, including those who do not end up enrolling in university.

5.2.3 CQI Reporting



An important benefit of the CQI Planning Tool is that it can be aligned to subsequent reporting requirements. Ideally, plans and performance reports should speak to each other to enable an assessment of progress against its stated purpose.

Previous HEPPP investigations have reported perspectives from university staff that HEPPP reporting was not aligned with continual improvement processes (Zacharias, 2017), a notion reaffirmed in the SEHEEF stakeholder consultations (See Section 2.6) which highlighted the disconnect between planning and annual reporting. Other pertinent issues raised by stakeholders related to the annual reporting tools that universities had to complete. In particular, stakeholders expressed ambiguity in the data reporting requirements as problematic, as well as a lack of guidance on the expected level of reporting that was required for each program and its component activities.

In addition to these concerns, the review of literature and sample of submitted HEPPP Progress Reports highlighted that:

- There was often insufficient information on the methods (both quantitative and qualitative) used to support the findings presented. This led to inconsistency in reporting both within and between universities.
- An incongruence between the data reported in the data reporting section and the data reported in the main report.
- There was a lack of systematic information on the barriers and enablers to program implementation.
- There was a lack of information on the insights gained from different quantitative and qualitative data.

These limitations can be overcome through a more structured and meaningful data and performance reporting process. The proposed Program Data Reporting Tool has been designed to represent an aggregation of the data collected at the activity level. It is akin to the second part of the current HEPPP annual reporting tool. This can be found in the accompanying Appendix entitled, *SEHEEF Tools.* The Program Data Reporting Tool provides a summary of the number, reach and characteristics of HEPPP-funded activities within a university. This, in turn, allows these important attributes, defined clearly, to be routinely aggregated and reported at the sector level by the Australian Government (see Section 6.5). This is consistent with Recommendation 12 of the ACIL Allen Consulting (2017) report that proposed an annual state of 'HE equity report' that includes sector level reporting of HEPPP activity.

Furthermore, in conjunction with the system capturing information about participants in the HEPPP-funded projects, the Program Data Reporting Tool can provide additional information on the characteristics of projects to support advanced quantitative analyses and evaluation of individual programs at the university (see Section 5.3) and national (see Section 6.4.2) levels.

The CQI Annual Reporting Tool is directly linked to the CQI Planning Tool (see the accompanying Appendix entitled, *SEHEEF Tools)*. It aims to capture key information, in a succinct way, that enables a robust understanding of the three RBA™ performance measures: *How much did we do? How well did we do it? What outcomes did we achieve?* In doing so, the tool should enable universities when completing, and the Department when reviewing initiatives, to better understand:

- whether the program is meeting its goals and objectives;
- any implications for the program in terms of its design and implementation;
- the quantitative and qualitative methods that were used to collect data, and
- the initial outcomes that the program, and its activities, are contributing towards.

A previous criticism of the annual reporting requirements of HEPPP has been the compartmentalising of complex, multifaceted programs into single activities. It has been suggested that this can give an impression the HEPPP-funded initiatives consist of many small and unrelated activities. The CQI Performance Reporting Tool has been designed to avoid such an impression by requesting both activity and program level performance reporting in a connected way. Further, recognising the importance of learning and improvement, the tool includes fields requesting information on the barriers and enablers experienced during the implementation of the program. Importantly, the tool also includes fields requesting reflections on what was considered the most significant learning during the program implementation and the most significant change.

This approach draws on the Most Significant Change (MSC) approach to monitoring and evaluation. MSC is a participatory, story-telling approach (Davies & Dart, 2005) that involves asking an open-ended question, usually through a semi- structured interview or focus group. Although a variation on the original method, incorporating key features of the method in the CQI Annual Reporting Tool can encourage staff to reflect on what they consider to be the most significant change that they have observed and why. This could relate to the lives of the program beneficiaries; an aspect of how the program was delivered; or the wider institutional or policy environment. This offers a useful approach as part of the CQI component of the SEHEEF because:

- It can provide a useful and pragmatic method for capturing diverse and emergent outcomes across a broad range of activities and perspectives, potentially increasing the accessibility and equity of contributions.
- It can be implemented in situations which do not require contributors to have formal reporting or evaluation skills. Indeed, many programs are already obtaining qualitative insights from participants; MSC provides a structured and consistent approach for doing so.
- It can help to explain how change comes about (processes and causal mechanisms) and when (in what situations and contexts), which may not be picked up by other CQI data.
- It is open-ended, allowing participants to articulate what is important to them, including tacit values, in their own words. This contrasts with other approaches, where the key criteria for ‘success’, ‘effectiveness’ or ‘impact’ are pre-determined by the project or the evaluators.
- If employed as a method across the sector, it provides a reasonably consistent approach across a diverse range of programs. Systematic approaches to share, discuss, and select the most significant stories could then be established (e.g., as part of a Community of Practice), supporting learning and improvement.
- Story-based approaches align with the recommendations of Smith et al. (2018) in their review of evaluation in the context of Indigenous HE, which concluded that they provide a ‘*legitimate, culturally relevant and contextual source of evidence’*. The same report recommended that Australian Government explicitly incorporates qualitative reporting and evaluation processes into all HE program funding agreements which aim to improve Indigenous HE access and outcomes.

5.3 Impact Evaluation

Evaluation is a discipline renowned for its ambiguous terms, often used in different contexts to mean the same thing. ‘Impact’ and ‘impact evaluation’ are examples of such terms. Impacts generally refer to the long-term changes brought about by an intervention, occurring later than short-term and

intermediate outcomes. However, there are numerous examples of impacts being used to denote outcomes that occur immediately post intervention as a direct result of an activity (e.g., increases in knowledge of HE pathways after participation in a training session on HE pathways). Unsurprisingly, such confusion extends to the concept of impact evaluation. For some, an impact evaluation considers the 'impact' of an intervention on any outcome, short- or long-term. For others, impact evaluation is concerned with long-term effects only.

> The Organisation for Economic Co-operation and Development (OECD) has defined impact evaluation as:
>
> *The positive and negative, intended and unintended, direct and indirect, primary and secondary effects produced by an intervention.*

This definition by the OECD (2010, p. 24) is broad and can, therefore, capture any evaluation that systematically and empirically assesses the effects of an intervention, covering both outcomes and impacts. The defining feature of an impact evaluation is that it attempts to establish the extent to which an intervention has caused, or contributed towards, observed effects.

Different evaluation designs and research methods can be used to evaluate impacts and to make assessments of attribution or contribution. Indeed, there can be different views as to what constitutes credible, rigorous and useful evidence (Rogers, 2012). QIE uses quantitative methods to measure the change in an outcome that is attributable to a defined intervention based on a credible and rigorously defined counterfactual.

This is consistent with the United States Agency for International Development definition of impact evaluation:

> *Impact evaluations measure the change in a development outcome that is attributable to a defined intervention; impact evaluations are based on models of cause and effect and require a credible and rigorously defined counterfactual to control for factors other than the intervention that might account for the observed change.*

Such a quantitative approach to impact assessment is consistent with the 'effectiveness and impact evaluation' concept that was included in Recommendation 4 of the ACIL Allen Consulting (2017). This type of approach relies on experimental or quasi-experimental evaluation designs, which are commonly positioned as providing the strongest type of evidence based on evidence hierarchies from clinical settings (ACIL Allen Consulting, 2017; Harvey et al., 2021).[10]

While undoubtedly an important part of impact evaluation, a purely quantitative conceptualisation of a program's impact has limitations, such as:

- being concerned only with intended rather than unintended effects;
- narrowly defining 'impact' from a particular perspective and assuming it can be measured quantitatively;
- assuming a direct link between a program and outcomes;
- assuming a suitable counterfactual can be identified and incorporated;
- not including the perspectives of staff delivering the program and those affected by the program;

[10] Though it should be noted that it has previously been suggested 'Properly controlled evaluation studies are methodologically impossible or ethically unacceptable"

- being weak at dealing with contextualisation, including institutional, cultural, historical and economic settings (Stern, 2015)

Indeed, a recent review of international literature strongly challenged the ACIL Allen recommendation, asserting that it did not engage with the literature challenging the claims upon which the evidence hierarchy operates, including problems associated with adopting RCTs in social fields of investigation (Burke et al., unpublished).

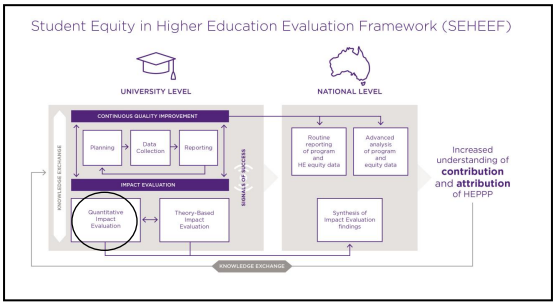
To support causal attribution, it has been argued that it is not only important to understand the effects of a cause (often the focus of quantitative studies), but also the causes of an effect (often the focus of qualitative studies) (Stern, 2015). This is consistent with the view that knowing that impacts have happened because of a program or activity (i.e., what works?) is insufficient; to be able to learn from impact evaluations and apply them to other contexts, an understanding of how and why the results have been achieved is also required (i.e., what works, for whom, in under what circumstances, how, and why?). To meet these needs, or to open up the 'black-box' as it is commonly referred (Rogers, 2012; Stern, 2015; Treasury Board of Canada Secretariat, 2021), a theory-based approach to impact evaluation is also required.

These approaches should not be considered mutually exclusive; theory-based approaches to impact evaluation can incorporate counterfactual-based quantitative designs (Rogers, 2012; White, 2009). Where appropriate, hybrid approaches using both TBIE and QIE are likely to generate the most meaningful and actionable insights. When defined broadly and incorporating both QIE and TBIE approaches, the four high-level key evaluation questions typically asked in impact evaluations are (Stern, 2015):

- To what extent can a specific impact be attributed to the program?
- Did the program make a difference, for whom, in what ways and in what circumstances?
- How has the program made a difference?
- Will the program work elsewhere?

These questions should be tailored and expanded to meet the specific needs of a program. More information is provided in the accompanying Guidance Manual.

5.3.1 QIE



QIEs aim to produce robust estimates of the impact of a program on target beneficiaries. They do this by comparing outcomes in the group receiving an intervention to a so-called counterfactual, a control group that did not receive the intervention. Experimental designs involve a process whereby exposure to intervention and control groups is randomly assigned. Such Randomised Controlled Trials (RCTs) are generally considered to offer the most robust QIE design (HM Treasury, 2020b) because the randomisation process helps to minimise differences between groups. However, their usefulness for evaluations of interventions taking place in a complex real-world social context has been questioned (Deaton & Cartwright, 2018).

Given the highly specialised requirements of setting up and implementing evaluations with randomised experimental designs, the SEHEEF places emphasis on quasi-experimental designs. Quasi-experimental designs do not require randomisation but attempt to mimic an experimental approach by comparing observed outcomes with another broadly comparable group, or by analytically

creating a counterfactual that is as close to the intervention group as possible. The extent to which QIE is possible for an individual program will therefore depend on the ability to identify meaningful counterfactuals and control groups, and on the availability of the outcome data for the intervention and/or control group. For the purposes of the SEHEEF, the use of QIEs is considered appropriate for assessing the impact of an equity program on primary outcomes (see Section 5.3.1.3), thereby relying on the use of administrative data. As outlined earlier in the report, QIEs are expected to be conducted at the program level for a selection of programs prioritised for impact evaluation by universities.

It is also worth noting that while the focus of the following sections is on university level QIEs, some of the considerations would also apply to advanced analysis of equity data at a national level – provided that information on participation in equity programs is collected across the sector in a standardised fashion, and provided to the Department on a regular basis as part of routine data sharing (as proposed in Section 5.2.2). National level evaluation is discussed in Chapter 6, with appropriate references to the material covered in the following sections made in that chapter.

5.3.1.1 Quantitative Impact Methodologies

In order to enable evaluation of HEPPP-funded programs, it is necessary to collect some information about these programs, and their participants. Currently, the only information that is systematically collected at the sector level is in the form of aggregated HEPPP Access and Participation Plans and HEPPP Annual Progress reports. These reports provide a high-level picture of the HEPPP-funded programs delivered by each university, including general information on what is being undertaken and how frequently. A more systematic method of planning, measuring and reporting has been proposed and discussed at the beginning of this chapter. In the next section, key issues are discussed around quantitative data collection and analysis.

5.3.1.1.1 QIE design: Identifying control groups

A key issue to consider in the context of QIE is the ability to identify meaningful control groups, and the data needed to source the information about the outcomes for the control groups. This in turn will depend on the design of a particular project.

Table 14 presents a number of scenarios, based on the design of a particular HEPPP-funded project in terms of how it is delivered. The table groups together Pre-Access and Access stages, and then again Participation and Attainment/Transition out stages since what is the key distinction here is whether the project is targeting individuals prior to university enrolment or university students. Furthermore, the primary focus here is on projects delivered at schools in the Pre-Access & Access stages, and at universities in the Participation/Attainment & Transition Out stages. While these cover a bulk of projects delivered under HEPPP, there might be some other designs that will require specific attention to the design from the team undertaking QIE of such projects. Examples include outreach projects delivered outside of school settings (e.g., career fairs), projects targeting families or communities, or projects operating at the Access stage that target individuals other than school students (e.g., those taking alternative pathways into HE).

Table 14 is organised by the relevant student life stage (first column in Table 14). The project design (second column in Table 14) describes the target cohort to whom a particular project is delivered. It uses the term ‘target population’, which describes the intended population that the particular project is meant to target. For instance, this could be ‘all low-SES students in school’ for one HEPPP-funded project, or ‘all low-SES students in Year 10’ for another project. The crucial consideration here is whether a particular project is delivering activities to all students in the target population (e.g., career advice provided to all students in a low-SES school) or just a selected subgroup of the target population (e.g., a scholarship or a mentoring program offered to selected students within a low-SES school). The last column in Table 14 outlines what type of data would be required to capture information on outcomes for the intervention group (i.e., a HEPPP-funded project) and the control group in order to support QIE of that project.

Table 14. Potential Intervention Designs and the Data needed to Capture Information on Outcomes for Intervention and Control Groups, According to Student Life Stage.

Stage	Intervention design	Data needed to capture information on outcomes for intervention/control groups
Pre-Access & Access	1. Single school – selected students from a target population	• Individual-level data for all students in that school in the target population
	2. Single school – all students in a target population	• Individual-level data for all students in the target population from the intervention school and (comparable) non-intervention school(s)
	3. Multiple schools – selected students from a target population	• *(Preferred)* Individual-level data for all students in the target population from the intervention schools; OR • School-level data covering the intervention schools and non-intervention schools, with the information on the proportion of the students in the target population subject to the intervention in a particular school
	4. Multiple schools – all students in a target population	• Individual-level data for all students in the target population from the intervention schools and non-intervention schools; OR • School-level data covering the intervention schools and non-intervention schools, with the information on which schools were subject to the intervention
Participation & Attainment and Transition out	5. Single university – selected students from a target population	• Individual-level data for all students in that university in the target population
	6. Single university – all students in a target population	• Individual-level data for all students in the target population from the intervention university and (comparable) non-intervention university(ies)
	7. Multiple universities – selected students in a target population	• Individual-level data for all students in the target population from the intervention university; OR
	8. Multiple universities – all students in a target population	• Individual-level data for all students in the target population from the intervention universities and non-intervention universities

The intervention design, as outlined in Table 14, will have implications for the data than is required to support QIE of a particular project in three main ways:

- The stage of the student life course at which the project is delivered will determine whether data from schools or from universities need to be sourced to support QIE of the project;
- Whether selected or all individuals in the target population are subject to the intervention will determine whether appropriate control groups can be sourced internally, or whether external

data (i.e., data on schools/universities that are not subject to the intervention) will also need to be sourced;

- Whether the project is targeting a single school/university or multiple school/universities will further influence the extent and characteristics of the external data needs to be sourced in order to support QIE of that project.

When the above criteria are combined, eight distinct design types are produced, with each of them having different consequences in terms of data requirements to support QIEs. These are discussed in the following paragraphs, with the corresponding designs at the Pre-Access/Access and Participation/Attainment & Transition Out stages grouped together to avoid repetition.

Intervention designs 1 & 5: Selected students in a single school/university

If a particular project targets selected students in a single school (Intervention Design 1) or at a single university (Intervention Design 5), it might be possible to establish the impact of that project by drawing on data from that school/university only, without the need to source any external data. This is because, under these scenarios, a meaningful counterfactual could be constructed by comparing the intervention group (e.g. low SES students on a certain scholarship) against similar non-intervention students (e.g. low SES students from the same school/university who did not receive the scholarship). However, the success of this strategy will crucially depend on the size of the intervention group, and the size of the target population, which in some cases might not be large enough size to support a robust impact evaluation. Power analysis, taking into account the specific parameters of the project, would need to be undertaken by the evaluation team to assess the likelihood of success of this strategy. If such analysis suggests that the size of the intervention group/target population is too small, adequate control groups using externally sourced data might need to be considered. In these cases, the process would be similar to the other designs described in this section. It is further important that in designs targeting selected students only, the nature of the process underpinning the selection into the intervention (including self-selection) would need to be taken into account when designing the specific analytic strategy in order to obtain unbiased estimates of causal impacts of the project (also see Table 16).

Intervention designs 2 & 6: All students in a single school/university

Intervention designs 2 and 6 in Table 14 assume that a particular intervention targets all students in a target population in a single school at the Pre-Access/Access stages (Intervention Design 2), or all students in a target population at a single university at the Participation/Attainment stages (Intervention Design 6). An example of such intervention is a career guidance program offered to all low-SES students in a particular school or at a particular university.

Under this scenario, to undertake a robust quantitative impact analysis, data on comparable control (non-intervention) groups would have to be sourced using external data on students from other schools/universities. Ideally, this would be data at the individual student level covering all universities in case of projects delivered at the Participation stage (such as HEIMS/TCSI data), or for Pre-Access stage, school data covering all schools in a relevant sector in a particular state or territory (e.g. all Government schools in a particular state or territory), such as those available from TACs or State Departments of Education. With this data adequate control groups could be constructed by identifying non-intervention schools/universities that are similar in characteristics to the intervention schools/universities, e.g. using matching techniques (see Table 16), while also appropriately adjusting for student-level and school-level characteristics.

Intervention designs 3 & 7: Selected students at multiple schools/universities

Intervention designs 3 and 7 in Table 14 assumes that a particular intervention stage targets selected students at multiple schools at the Pre-Access/Access (Intervention Design 3), or at multiple universities for programs delivered at the Participation/Attainment and Transition Out stages

(Intervention Design 7). An example of such an intervention would be a mentoring or scholarship program where a select group of low SES students from multiple schools is invited to participate. While arguably this type of design is likely to be much more common at the Pre-Access/Access stages (e.g. an individual university working with multiple schools), it is possible that some coordinated activities delivered by a consortia of universities delivered at the Participation stage would also fall into this category.

To rigorously evaluate impact of this kind of intervention would require individual level data from all students in the multiple schools/universities that are subject to the intervention. Similar to the Intervention Designs 1 & 5, appropriate control groups could be constructed using students from participating schools/universities who did not participate in the intervention. As before, the nature of the selection mechanisms (including self-selection) into the intervention would need to be taken into account when designing the analytic strategy in order to obtain unbiased estimates of the impact.

In the absence of individual-level student data, a distinctly second-best option, and only available for projects delivered at the Pre-Access/Access stages, would be to try to assess the impact of the project using school-level data. This would require the information on the reach of the program or activity within a particular school (e.g. what percentage of low SES students in each school has been targeted), as well as a school-level aggregate information about the outcomes – e.g. the proportion of low SES students who completed Year 12. However, such a school-level analysis represents a relatively risky strategy. First, it runs the risk of suffering of ecological fallacy and is subject to lower precision due to the fact that individual-level intervention data is being aggregated to a school level, with detail inevitably lost in this process. Second, compared with individual-level data, school-level data offers far less flexibility in terms of capturing characteristics that could be used for the purpose of matching or statistical adjustment in models (see Table 15). Third, the sample size in a school-level data will inevitably be far smaller compared to the individual level data, which could jeopardise the efforts to evaluate projects that only operate in a small number of schools. As before, power analysis taking into account the specific parameters of the project would need to be undertaken by the evaluation team to assess the likelihood of success of this latter strategy in the absence of individual-level data.

This latter strategy would not be able to be applied for programs delivered at the Participation or Attainment and Transition Out stages due to the small number of universities eligible for equity funding, which would prevent a reliable university-level analysis of impact.

Intervention designs 4 & 8: All students at multiple schools/universities

Intervention Designs 4 and 8 in Table 14 assume that a particular program targets all students in multiple schools/universities, when delivered at the Pre-Access/Access or Participation/Attainment stages respectively. An example of such an intervention would be a career advice program offered to all Aboriginal and/or Torres Strait Islander students across multiple schools.

To rigorously evaluate impact of this kind of program would require individual student-level data from all universities in case of the programs delivered at the Participation/Attainment stages (such as HEIMS/TCSI data described in Section 5.3.1.3), or all schools in in a particular state or territory (or a given sector within a state/territory, such as data on government school students available from State Departments of Education). Such data would cover both the intervention schools and non-intervention schools, which would enable sourcing appropriate controls from non-participating schools/universities.

Again, in the absence of individual-level student data, a distinctly second-best option that is only available at the Pre-Access/Access stages, would be to try to leverage school-level data. In this scenario, data on the proportion of participating students would not be needed (as all target group students in the intervention school would be targeted) but instead a flag identifying intervention schools would be sufficient. However, all the limitations of the school-level analysis described before still apply in this design scenario. As before, the success of this latter strategy would depend on (i) the

availability of school-level data covering all schools in a particular state or territory; (ii) the ability to find a good match at the school level, based on school-level characteristics available; and (iii) the number of schools subject to the intervention and the number of available non-intervention schools. Power analysis, taking into account the specific parameters of the intervention would need to be undertaken by the evaluation team to assess the likelihood of success of this latter strategy in the absence of individual-level data from all students in a particular state or territory.

As in Scenario 7, this latter strategy would not be able to be applied for projects delivered at the Participation/Attainment stages due to the small number of universities eligible for equity funding, which would prevent a reliable university-level analysis of impact.

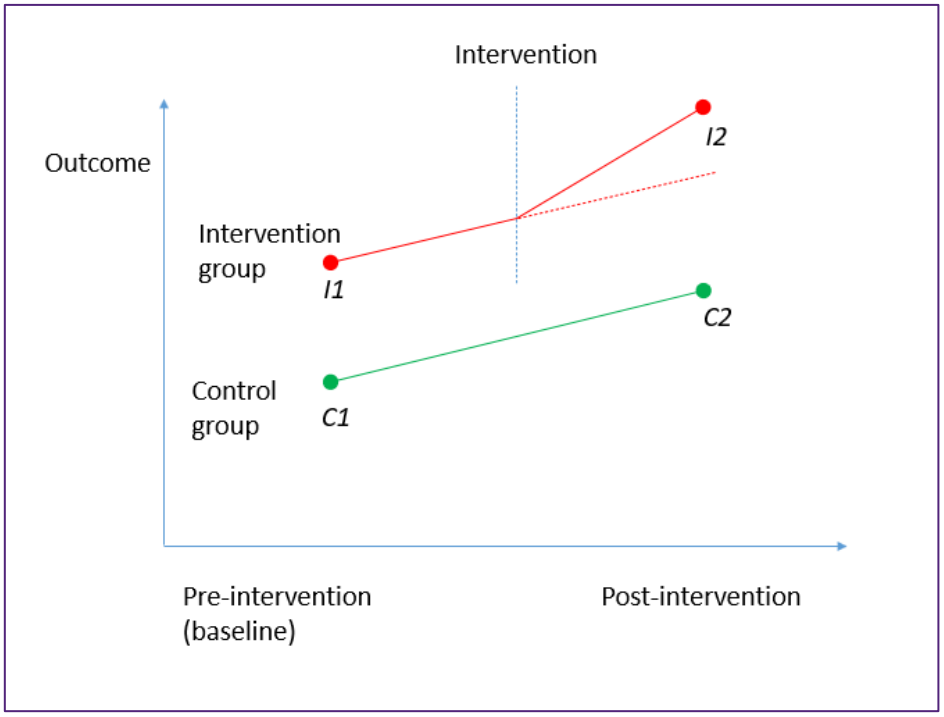
5.3.1.1.2 QIE design: availability of relevant outcome data

The previous section considered strategies that would need to be followed in order to construct control groups to support QIEs. If that is possible, appropriate statistical techniques can be used to estimate a causal effect of a particular program on the relevant outcomes. However, such outcome data might not be available in practice, or cannot be easily obtained, e.g., due to access requirements set by a relevant data custodian (see also discussion in Section 6.4.3.1). While robust QIE might not be possible in such cases, it might still be possible to apply certain analytic designs to support specialised (quantitative or qualitative) analyses of data to complement routine CQI data reporting and analyses. This section outlines possible options depending on the availability of data on the intervention and control groups over time. In particular, it considers the implications of availability of the relevant outcome data for the ways in which this data can or cannot be used to support QIE of equity projects.

Figure 11 illustrates a hypothetical effect of an equity program on a student outcome that can be measured over time. Examples of relevant outcomes include academic performance at school or university, which can be tracked over time. The red line represents the intervention group, i.e., those individuals who participated in a particular HEPPP-funded program, while the green line represents an appropriately selected control group. In principle, for both groups data could be captured both before the intervention takes place – the so-called baseline data (i.e., I1, C1 respectively) – and after the intervention (i.e., I2, C2 respectively).

Due to a non-random allocation of participants into equity interventions, participants and non-participants (i.e., control group) could differ on the outcomes of interest even before the intervention (at the baseline). This is illustrated in Figure 11 by the fact that the data point I1 is different from C1. Such a situation could occur, for example, if participation in a particular equity program targeting low SES students is voluntary, with participants self-selecting or being selected (e.g., by schools) into the program. In this situation, the sub-group of low-SES participants who participate in the program might be different from those low-SES individuals who chose not to participate or are not selected (e.g., by their schools) to participate.

Figure 11. Hypothetical Effect of an Equity Program on a Student Outcome



While ideally all four of the data points described in Figure 11 would be available this may not always be possible for a number of reasons, including the timing and timeframes of interventions or the fact that parts of the data (e.g., pertaining to a suitable control group) are not available to the project team, e.g., is held by external data custodians. Furthermore, some of the relevant outcomes are only observed at a particular point in time, such as Year 12 completion, or degree completion, which means that by design only post-intervention outcomes can be observed.

The availability of relevant data on outcomes will shape the suitability of the data for supporting QIEs of equity projects. Depending on the availability (or not) of the data for the intervention group and the control group at different time points in relation to the timing of the intervention, data might be able to support QIEs, or it might be more suited for the purpose of supporting CQIs, described in detail in Section 5.2.

The first thing to note is that the availability of the post-intervention outcome data for the intervention group (I2 in Figure 11) is a necessary condition in order to make any statements about the effects or performance of a program. Assuming that this condition is met, there are four main scenarios related to data availability, each of them having implications for the application in the context of SEHEEF, and the type of analysis that is possible under that particular scenario. These are presented in Table 15.

Scenario 1: I2 only

If baseline data (pre-intervention) were not collected for the intervention group, then only post-intervention data for the intervention group would be available (Scenario 1). Under this scenario, rigorous QIE is not possible, although some analysis could still be undertaken, building on and potentially expanding the analyses undertaken as part of the CQIs component. Research strategies could involve collecting self-reported (subjective) information from the intervention participants about the perceived success/perceived impact of the intervention, on the quality of the service delivered, and so on. This could be done using structured surveys or using qualitative data collection methods, or both via a mixed methods approach. Quantitative data could be analysed using descriptive

statistics or standard regression methods in order to identify correlates of perceived success. Thematic analysis could be applied to qualitative data collected from the program participants.

If objective data on outcomes for the project participants are available (such as those collected in administrative data collections), then again descriptive statistics or regression modelling could potentially be used to identify correlates of better outcomes. However, causal attribution would not be possible given the lack of a control group.

In Scenario 1, it would also be possible to use external information on the outcomes for the population of interest as a benchmark that could be used to monitor progress of the project towards an established goal (such as percentage of low SES students in a particular state who complete Year 12). Such benchmarks could be derived based on information sourced from relevant population data (e.g., admin data collections, if available) or estimated using external surveys that derive samples from the population of interest. However, such analysis would not satisfy the criteria of QIE and could not be used to make claims about causal impact of a particular program or activity.

Scenario 2: I2 and I1

If, in addition to the post-intervention data, the baseline data is also available for the intervention group, it would be possible to run pre-post comparisons aimed at gauging how much the outcome of interest has improved over time (i.e., between pre- and post-intervention measurements). Appropriate analytic methods, including methods for longitudinal data, such as first-difference or fixed effects models could be used to identify the correlates of changes on the outcomes. However, while informative, such analysis would not support causal attribution due to a lack of appropriate control group. This is because, even if a change was observed (e.g., an improvement) on the outcome of interest for the intervention group, we would not know if the outcome for the control group followed the same or different trajectory – if both the intervention and the control group followed the same trajectory over time that would indicate that the observed changes occurred due to factors unrelated to the intervention.

While unable to support QIEs, the results from such analyses could be used to supplement the results of analyses undertaken by universities as part of routine CQI monitoring of program and activity data. As in Scenario 1, external benchmark data could be used to set and monitor progress towards a target set for specific populations of interest. As in scenario 1, quantitative analyses could be further complemented by with qualitative data, such as feedback from the program participants, including its perceived success.

Scenario 3: I2 and C2

If data for both the intervention group and an appropriately identified control group is available at the post-intervention stage only (Scenario 3), matching methods can be used to estimate the effect of the intervention. These methods adjust for the differences between the intervention group and the controls, effectively creating a counterfactual through statistical means. This adjustment should be ideally based on the characteristics that are either measured pre-intervention or can be assumed to be unaffected by the intervention. More details on those methods can be found in Section 5.3.1.1.3.

Scenario 4: I2 & I1 & C2 & C1

Scenario 4 offers the broadest possibilities in terms of analytic designs, including the methods that allow for adjustment of the baseline differences between the intervention and control groups, such as difference in differences estimation. This type of approach has the advantage of being able to not only control for the observable differences between the intervention and control group but also take into account differences on unobserved characteristics that are constant over time.

It is worth noting that some of the above scenarios are nested within one another, for instance Scenario 2 includes data described under Scenario 1, and Scenario 4 includes data described under

Scenario 2. In these cases, the analytic approaches available for the latter scenario also include the analytic approaches available for the former. For instance, under Scenario 4, it is possible to collect subjective feedback from the intervention participants, in addition to assessing the change in their outcomes using more objective data.

Table 15. Data Availability and Analytic Designs.

Scenario & Data	Description	Application	Analysis design (examples)
Scenario 1 (I2 data only)	Only post-intervention data for the intervention group	Correlational analysis (to support CQI)	Descriptive analysis of self-reported data from intervention participants obtained via surveys or qualitative/mixed-method studies Regression analysis to identify correlates of self-reported outcomes Benchmarking against relevant populations/target groups
Scenario 2 (I2 & I1 data)	Both pre- and post-intervention data for the intervention group only	Correlational analysis (to support CQI)	Pre-post comparisons, e.g. score change differentials Regression models with lagged predictors, first difference, fixed effects methods to identify factors associated with bigger changes in outcomes Benchmarking relevant populations/target groups
Scenario 3 (I2 & C2 data)	Only post-intervention data for both the intervention and control groups	QIE	Matching methods (on pre-intervention characteristics, if possible), e.g. propensity score matching, regression adjustment designs, inverse probability of treatment weighting
Scenario 4. (I2 & I1 & C2 & C1 data)	Both pre- and post-intervention data for both the intervention and control groups	QIE	First difference, fixed effects methods to identify the effect on the change in outcomes Models adjusting for the baseline differences between controls, e.g. difference-in-differences

5.3.1.1.3 Statistical techniques for QIEs

This section extends the previous discussion by outlining the statistical techniques that could be employed by specialised evaluation teams to undertake QIEs of HEPPP-funded projects. As noted earlier, while these are presented here in the context of university-level evaluations, these methods could be also applied for analyses at a national level, provided that relevant data on participants in HEPPP-funded projects are available in a standardised way across the sector. Table 16 describes a number of statistical techniques that could be used for QIEs, including examples of potential application in the SEHEEF context.

Table 16. Statistical Techniques or Methods that could be used to support QIEs.

Method/ Statistical Technique	What is it?	Example of potential application in the SEHEEF context
Fixed effects/ first difference estimation	Both fixed effect and first difference used with panel (longitudinal) data allow addressing the problem of omitted variables. In the fixed effects estimation, this is achieved by de-meaning, that is subtracting subject-specific means from each of the subject's measurements. This transformation means that only within-subject variability will be considered. In this approach each subject is used as their own control. First difference is an alternative solution. It also relies on using subjects as their own controls. It does so by differencing the measurements in time t and time t-1.	Estimating the relationships between changes in material resources and changes in expectations to pursue HE studies
Propensity Score Matching (PSM)	PSM is a statistical technique used to construct a counterfactual or comparison/control group, which enables the estimation of an intervention's impact. It can be used in situations when a randomised controlled trial is not possible or desired. In observational or non-randomised studies, subject characteristics can influence selection into intervention group, and direct comparison of outcomes between the intervention and non-intervention groups can be biased. The technique entails calculating propensity scores (such as predicted probabilities of intervention assignment based on a logistic regression model) and matching intervention subjects to non-intervention subjects with a similar value of the propensity score. Such a matched sample allows estimation of a causal effect by directly comparing outcomes between the intervention and control groups. However, the impact estimates might still be biased as the technique accounts only for observable characteristics, and unobservable factors can still affect the results. Therefore, sensitivity analysis is recommended to ensure the robustness of the results. Only pre-intervention characteristics should be used for matching, which means that the data need to be collected before the intervention, or only time-invariant variables can be used. In addition, data on subjects' characteristics have to come from the same source or be comparable.	Estimating the difference in HE completion rates for matched samples of participants and non-participants in an academic preparedness course

Method/ Statistical Technique	What is it?	Example of potential application in the SEHEEF context
Inverse probability of treatment weighting (IPTW)	IPTW is a method that can be used to reduce bias in non-randomised trials. In the conventional approach, the first step is to calculate propensity scores (PS) (as outlined under PSM). PS are then used to calculate weights: 1/PS for those in the intervention group, 1/(1-PS) for those not in the intervention group. The weights are then used in the analysis of impact.	Estimating the difference in HE completion rates for matched samples of participants and non-participants in an academic preparedness course
Regression discontinuity (RG)	RG is another potentially useful method when a random assignment is not viable. RG can be used when there is a cut-off threshold to assign the intervention (e.g., a grade requirement when assigning a scholarship). In such cases, a simple comparison of the outcomes would be biased because of the relationship between the assignment criterion and outcomes. However, when only a small group of subjects is considered, subjects that are just below the threshold can be assumed to be similar to those just above the threshold. Then, the intervention constitutes the only significant difference between the two groups. Therefore, a comparison of the outcomes of those just above and just below the intervention threshold can be used to evaluate the impact of the intervention. However, this method is not suitable for evaluating the effectiveness of interventions among subjects further from the threshold, and it requires making multiple assumptions.	Estimating the (changes in) academic performance of scholarships recipients (comparing the outcomes for those just above and just below a scholarship eligibility threshold)
Instrumental variable estimation (IVE)	IVE is another method that can be applied if a randomised controlled trial is not feasible. The method requires identifying an instrumental variable that influences participating in the intervention but does not affect the outcome. Adding an instrumental variable to a regression model enables an unbiased estimation of the impact of the intervention. However, IVE can only be relied on to capture the intervention's effect on those whose participation depends on the instrument. It will not provide estimates of the effect for those who would be subject to the intervention regardless of the instrument.	Using variations in distance to university as an instrument to estimate a causal effect of participation in an online employability course on post-graduate outcomes

Method/ Statistical Technique	What is it?	Example of potential application in the SEHEEF context
Interrupted time series analysis (ITSA)	ITSA is a quasi-experimental method, which uses time-series data to evaluate the causal effect of an intervention. The technique entails investigating changes in the trend of outcomes that follow the introduction of an intervention. This approach does not require a control group. Instead, it is assumed that the trend would continue without the intervention. The analysis requires time series data before and after the intervention. An ordinary least squares regression model is used to model the immediate effect (level change) and sustained effect (slope change). The approach relies on the assumption that there were no other interventions or events that could influence the trend. If this is not the case, a control group might be required to estimate the effects of an intervention. Furthermore, researchers have to account for seasonality and autocorrelation. The method works best when the intervention takes place at a specific point in time, and when long time series with multiple data points pre- and post-intervention is available.	Estimating the effect of changes to a university's scholarship policies on students' Grade Point Average (GPA) measured on a term basis
Difference in Difference (DiD)	The DiD approach compares the outcomes of the treatment and control groups before and after the intervention, meaning that it requires longitudinal data. It is assumed that the trends for both groups would be parallel without an intervention, meaning that the difference between groups would remain unchanged. Divergence from the parallel trend after the intervention is interpreted as the impact of the intervention.	Estimating the effect of an academic skills development program on changes in academic performance (by comparing shifts in performance for participants and non-participants)

Sources: Austin (2011); Mansournia and Altman (2016); Rabe-Hesketh and Skrondal (2012)**.**

5.3.1.1.4 QIE design: Additional considerations

The scenarios described in the previous sections outline the options for undertaking QIEs of equity projects depending on the intervention design and the availability of the outcome data for the project participants and an appropriate control group (over time). However, even if a suitable control group could be identified and data on both the intervention and the control group secured, there are a number of further issues that can interfere with the ability to establish a reliable causal effect that would need to be taken into account when designing the evaluation.

First, multiple projects could be operating in the same school/ university and it might be difficult to separate the effect of a particular project from the effects of other projects operating concurrently in the same school/university. Second, spill-over effects within school/university would need to be taken

into account when estimating causal impacts of a particular project. A spill-over effect refers to the fact that even if only selected students are being targeted by a particular project (e.g., provision of information), the non-intervention students can learn from the intervention group, contaminating the outcomes in the control group. Furthermore, since different projects operate in different schools/universities, the non-intervention group (from the perspective of a particular intervention) could be subject to some other intervention. This would affect the ability to identify a 'pure' control group, that is comparable students who were not subject to any intervention.

All of the above are just examples of issues that would have to be taken into account by the evaluation team who is evaluating a particular project. These issues were also raised in stakeholder consultations on the draft Evaluation Framework, with stakeholders commenting on the difficulties with causal attribution or contribution in the presence of multiple projects targeting the same populations (See Chapter 7).

It is not possible to anticipate and describe all particular scenarios here, which is why the QIEs will need to be designed by specialised teams who have good understanding of the particular project they are evaluating. Furthermore, the scenario where there is lack of definitive evidence of causal attribution or contribution by a particular project also needs to be considered. Such a scenario does not necessarily mean that the project is ineffective and careful consideration of the project parameters, the context in which it operates, and the quality of evidence including the quality of data used for QIE needs to be taken into consideration when drawing conclusions. The various limitations and risks associated with the lack of availability of suitable quantitative data, and the inability to draw causal links based on this data, strengthens the argument for mixed methods approaches with qualitative approaches to complement the quantitative impact evaluations, as outlined in section 5.3.2 on Theory-Based Impact Evaluations.

5.3.1.2 Capturing Outcome Data

A key stage of the data audit involved mapping out the Australian datasets with relevance to the Evaluation Framework in order to identify sources for capturing outcomes relevant to SEHEEF. This was implemented by scanning and scrutinising technical documentation and drawing on the project team's experience working with jurisdictional administrative datasets. The purpose of the data mapping component was to determine the ways existing data sources can be used to support impact evaluation of HEPPP-funded programs. Specifically, this component of the project aimed to identify data sources for capturing the information on indicators relevant for measuring primary and supporting outcomes associated with HEPPP-funded programs. It further aimed at assessing the suitability of different data sources for the purpose of supporting QIE.

This section presents the key findings from this stage of the project. Combined with the findings from stakeholder consultations (see Box 2 on page 43), these findings outline the existing, emerging and future data architecture that could be used to support QIE of the HEPPP-funded programs, and the advanced analyses of equity data at the national level. Appendix D presents further information about the individual data sets.

A range of datasets were scrutinised during the Data Audit (see Table 17), and grouped into the following categories:

- **Administrative data sources (national or state-level)**, capturing administrative records captured or compiled by various institutions at the State or Commonwealth level;
- **Population surveys (national or state-level)**, comprising wide-reaching surveys that are administered to whole populations (although due to non-response they do not cover the full populations) and are typically managed by government-affiliated agencies, and
- **Sample surveys (national or state-level),** including large-scale surveys utilising samples of target populations.

Table 17. Data Sources included in the Data Audit

	Administrative data	Population surveys	Sample surveys
National	• Tertiary Collection of Student Information (TCSI) • University Applications and Offers Data Collection • NCVER: Total VET Activity (TVA) data, National Apprentice and Trainee Collection • MADIP data including information from: Australian Taxation Office; Medicare Benefits Schedule (MBS) & Pharmaceutical Benefits Scheme (PBS); SSRI/Domino • Census of Population and Housing • The Australian Curriculum, Assessment and Reporting Authority (ACARA): School data & NAPLAN Data • Australian Early Development Census	• QILT Student Experience Survey • QILT Graduate Outcomes Survey (GOS) • Student Outcomes Survey (SOS)	• General Social Survey (GSS) • National Health Survey (NHS) • The Australian Longitudinal Study on Women's Health (ALSWH) • The Australian Longitudinal Study on Male Health (Ten to Men) • Survey of Education and Work (SEW)/ Labour Force Survey (LFS) • Survey of Income and Housing (SIH) • The Longitudinal Surveys of Australian Youth (LSAY) • The Longitudinal Study of Australian Children (LSAC) • Footprints in Time - The Longitudinal Study of Indigenous Children (LSIC) • Household, Income and Labour Dynamics in Australia (HILDA) Survey • Apprentice and Trainee Experience and Destination Survey • Life Patterns • Mission Australia Youth Survey • WPLS (Planned)
State	• School data (Government, Catholic and Independent) • State assessment authorities • NAPLAN Test administration authorities • Tertiary Admission Centres (TAC)	• The Tell Them From Me student survey (NSW) • Queensland Engagement and Wellbeing Survey • The Wellbeing and Engagement Collection (SA) • Student Attitudes to School Survey (VIC) • Annual Student Wellbeing Survey (TAS) • Government School Survey (NT) • Next Step post-school destination surveys (QLD) • On Track survey (VIC) • NSW Post-School Destinations and Experiences Survey	• Speaking Out Survey (WA) • The Australian Temperament Project (ATP)

5.3.1.2.1 Administrative data sources

Administrative data sources (both state and national) offer a high potential for impact evaluation purposes due to coverage of full populations. Therefore, they have the ability to reliably capture information about the outcomes of intervention participants, and to provide reliable source of data on control groups. However, they are generally most difficult to access (particularly at an individual level) as these data are often by-products of administrative processes rather than being designed specifically for research, monitoring or evaluation purposes.

Furthermore, like all other data sources, they do not currently include information about participation in HEPPP-funded projects, and this data would have to be linked in (see Section 6.4.3). As described in more detail in Chapter 6, this is likely to involve prolonged and complex processes, particularly when it comes to linking data at the Pre-Access/Access stages, which means that most of QIE based on administrative data are very much a prospect for the future. Furthermore, some of these data resources are only available via secure remote access environments, such as the ABS Data Lab (see Section 6.4.3.1 in Chapter 6 for more details), introducing further requirements in terms of data access, as well as the capabilities of the evaluation team.

One important exception in this group of data sources concerns the administrative data held by individual universities. Because universities have full access to their own data, this opens avenues for universities to undertake feasible QIEs using their own data. However, these impact evaluations would be limited to the interventions operating at the Participation/Attainment and Transition Out stages of the student life course, which is the only stage covered by this data. The feasibility of undertaking such evaluations would further depend on the ability to identify and capture outcome data for a reasonable control group within the same university, which would in turn depend on the design of a particular program, as discussed in Section 5.3.1.1.1.

5.3.1.2.2 Population surveys

Population surveys are deemed moderately useful for the QIEs of individual programs due to the following reasons:

- despite offering sample sizes that would be large enough to reasonably expect enough cases to potentially capture the impacts of individual equity programs, a robust impact assessment is complicated by non-response inherent in these data designs, and
- these surveys do not capture data about specific equity interventions so this information would have to be linked in; such linkage would be most straightforward for the datasets covering Participation/Attainment and Transition Out stages (the QILT datasets) and much more complicated for the Pre-Access/Access stages due to reasons described in Section 6.4.3.1.

They are also deemed ‘moderate’ in terms of ease of data access, due to the fact that these data are not publicly available and access to individual level data typically requires special permissions from the relevant data custodians (see Section 6.4.3.2 for more details).

Taking the above considerations into account, the most likely application of the population surveys is in the context of a system-wide evaluation of the HEPPP. This is because the power of this data can be more fully leveraged at the system level, due to large cumulative sample sizes (e.g. covering a large proportion of school students in a particular state, or a large proportion of university students nationwide), which makes it suitable for detecting population-level trends, despite the aforementioned issues of non-response and attrition. While it is possible that population-based surveys could also be used to support QIEs of individual programs, the feasibility of doing so would depend on the characteristics of the specific program, including its size, duration, coverage of the target groups, and the types of activities it covers.

5.3.1.2.3 Sample surveys

Sample surveys are considered 'easy' in terms of data access, due to the fact that access follows well-established standard protocols and the data would be generally available for research and evaluation purposes for researchers affiliated with individual institutions, as well as for those acting on behalf of the Department. However, their useability for the purpose of QIE is deemed 'low' due to a number of reasons:

- They only cover a sample of relevant populations. Even though these surveys all feature relatively large samples, in practice, the number of cases would not be enough to quantify the impact of a particular equity project.
- Even if the size of the sample was large enough, non-response and attrition are likely to present significant barriers to reliable estimation of causal impacts.
- These surveys do not capture information about specific equity projects. Even in the case of the WPLS (planned) the information captured is likely to be limited to a particular type of activity, rather than covering specific equity programs. While theoretically possible, linking in data about participants in specific equity projects would involve complex and prolonged data linkage processes with unclear benefits in terms of the ability to carry out robust impact evaluations, due to the limitations listed above.

Overall, sample surveys are likely to have two primary applications in the context of SEHEEF:

- Provide a source of data to analyse the associations between different *types* of equity activities, or certain *features* of equity activities and student outcomes (as opposed to evaluating the impact of specific activities on these outcomes), or
- Provide benchmark data that could be used for the purpose of setting targets for ongoing monitoring, e.g. the proportion of students in a particular target group or sub-population who should be expected to achieve a certain outcome by a certain time point.

Table 18 summarises the different data types in terms of their data access and their useability and applications in the context of QIEs. Altogether, the administrative data sources are the most suitable data type to support QIEs of individual HEPPP-funded programs. While access to this data can be a barrier for the evaluation teams (and might depend on who, or on whose behalf, undertakes a particular evaluation), the fact that the individual universities have full access to their own data opens up possibilities for rolling out QIEs of certain types of programs within a relatively short time frame. The ability to support such evaluations will depend on the program type and its parameters, and is likely to be initially limited to programs operating at the Participation stage, and with final outcomes pertaining to the Participation stage (e.g. retention, success, completion), rather than Post-Participation stage (e.g. employment outcomes). Further linkages of administrative data offer a pathway to broadening up the scope for QIEs to be extended beyond the Participation stage and to cover outcomes at all stages of the student life course. However, such linkages will be more feasible over a longer time horizon as a number of steps need to be undertaken in order to build such more extensive data infrastructure (see Section 6.4.3 for more details).

Table 18. Overview of Key Features of Different Data Sources.

	Administrative data sources	Population surveys	National sample surveys
Examples^	HEIMS, MADIP, University Applications and Offers, TCSI, NCVER, Census of Population and Housing, School and NAPLAN data, TAC data	QILT-SES, QILT-GOS, Next step, On Track, the Tell Them from Me Survey, Student Attitudes to School	HILDA, LSAY, GSS, NHS, ALSWH, Ten to Men, SEW and LFS, SIH, LSAC, LSIC, WPLS, ATP
Data access	***'Difficult' accessibility*** • permissions required from data custodians to access the data for a specific purpose • may involve additional constraints, e.g. remote access to secure environment • one notable exception is universities accessing their own administrative data (or DESE accessing their data holdings**)**	***'Moderate' accessibility*** • permissions typically required from data custodians to access the data (some will be more straightforward to access than others)	***'Easy' access*** • follows well-established standard protocols • available to general research community
Useability for QIE	***'High' useability*** • coverage of full populations • ability to measure outcomes for program participants and control groups • do not capture information about specific equity projects; this could be addressed by future data linkages (easiest at the Participation stage, more difficult at the Pre-Access stages)	***'Moderate' useability*** • typically offer large sample sizes (but not complete populations) • non-response and attrition impeding on estimation of causal impacts • do not capture information about specific equity projects; this could be addressed by future data linkages (easiest at the Participation stage, more difficult at the Pre-Access stages)	***'Low' useability*** • only cover a sample of relevant populations (low numbers at the individual school/university level) • non-response and attrition impeding on estimation of causal impacts • do not capture information about specific equity projects; unlikely to be resolved by data linkages
Applications	• suitable for QIEs of individual programs as well as the overall HEPPP (IRLSAF) evaluation	• system-wide evaluation of the HEPPP (IRLSAF) • possibly useful for QIEs of individual programs, depending on the characteristics of a particular program	• analysing the associations between different *types* of equity activities, or certain *features* of equity activities (rather than impacts of individual programs) • benchmark data for the purpose of setting targets for ongoing monitoring

Notes: ^refer to Table 17 for a full list of examples and full names.

5.3.1.3 Identifying Data Sources for Capturing Outcomes

This section takes the considerations about the suitability of the various datasets further by considering the specific intended primary outcomes and indicators, followed by the specific datasets that could capture the associated indicators.

Primary outcomes have been included in the Student Pathway Map (See Section 3.6), while the Program Logic Model (See Section 3.7) also includes the supporting outcomes relevant for these primary outcomes. It is important to emphasise that while QIEs of equity programs will often focus on primary outcomes, capturing the impact on the supporting outcomes is also crucial. While the focus on a core set of primary outcomes is necessary for achieving standardisation across the sector, the supporting outcomes allow for a more bespoke evaluation, one that incorporates the features of the local context and captures the relevance of more tailored and context-sensitive outcomes. The importance of such a nuanced approach was noted by stakeholders in consultations on the draft Evaluation Framework (see Chapter 7 for full findings). Specifically, stakeholders have highlighted the importance of picking up on the more intangible benefits of equity programs, including awareness raising, advocacy and improving practice. These more nuanced effects can be picked up through both the CQI and TBIE parts of the framework. However, it is also important to consider them in the context of QIEs, and the focus on supporting outcomes offers one way to achieve this.

Table 19 presents a library of primary and supporting outcomes, including a set of indicators associated with these outcomes. Table 19 maps the primary as well as the supporting outcomes against types of activities and student life course stages. This mapping indicates the connections between activities on the one hand, and supporting and primary outcomes on the other, while linking them with specific indicators that can be used to measure these outcomes. These connections are derived from the Program Logic in Section 3.7

The mapping was undertaken by the project team who attempted to logically outline connections between the four types of activities within different student life course stages and respective chains of outcomes, and the indicators associated with these outcomes. It was informed by literature concerned with measuring inequities and/or evaluating equity activities, which are referenced under the table. The tables are structured according to the student life course stage; the life course stages have been grouped into two broader categories to reflect when activities operate, i.e. combining the Pre-Access and Access stages, and Participation and Attainment and Transition out stages. This reduced the replication of content in the table.

This table provides practitioners and evaluators with a resource that will support the consideration of the outcomes and indicators that should be considered when planning for continuous quality improvement or impact evaluation.

The list of outcomes and indicators in Table 19 is illustrative rather than definitive. This particularly applies to the supporting outcomes. These can be defined in a multitude of ways depending on the particular HEPPP activity and the context in which it is implemented. For example, some programs may involve participants defining their own outcomes. As noted earlier, the table also includes columns for examples of indicators for supporting and primary outcomes. They are also generically defined (‘Measure of…’) because there can be various ways of defining relevant indicators for an outcome, and there can also be constraints in defining indicators in specific situations.

Table 20 and Table 21 present the data sources relevant for capturing the supporting and primary outcomes, respectively. As before, the Pre-Access and Access stages were combined in the tables as were the Participation and Attainment and Transitioning Out stages. The tables present the indicators, derived from Table 19, and link these to relevant data sources that could be used to capture these indicators. The tables also provide an overall assessment of the ease of access, suitability for QIE, and application in the context of QIE, as discussed in Section 5.3.1.2. Only outcomes which are supported by the three types of activities (Information & Experiences, Skills Attainment and Resource-based activities) are presented. Outcomes for Institutional Development activities are not included as

no relevant data sources have been identified. Further information about the individual data sets identified in Table 20 and Table 21 can be found in Appendix D.

Separating the data sources by the type of outcomes introduces a key distinction between datasets in terms of the feasibility of undertaking QIEs with these data. Specifically, as can be seen in Table 20 the large number of supplementary outcomes can largely be captured using existing population surveys (for benchmarking purposes only) or would need to be captured via purposely designed primary data collection (via quantitative surveys or qualitative interviews). However, the situation is different for the primary outcomes (see Table 21), which are captured well by various administrative data collections, making them suitable for QIEs of individual programs. These tables can be used as a guide for the relevant datasets that can be used as sources of information on outcomes for appropriate impact analyses, as described in Section 5.3.1.2. However, as outlined in Chapter 6, there are likely to be various challenges associated with linking such data at an individual level, that would need to be taken into account when planning the QIEs.

Table 19. Outcomes and Indicators for SEHEEF.

Stage	Relevant activity type	Supporting (initial) outcomes		Primary outcomes (for people from equity backgrounds)	
		Outcomes	**Relevant Indicators (examples)**	**Outcomes**	**Relevant Indicators**
Pre-access & Access	**Information & experiences**	• Increased knowledge and awareness of educational and occupational pathways • Increased awareness of the benefits of HE • Increased perception that HE is a viable option • Improved motivation to access HE • Increased knowledge of HE application processes	• Measures of awareness of educational pathways and HE study options • Measures that capture understanding of how higher and further education is related to professions and careers • Attitudinal measures such as HE aspirations and expectations • Measures that indicate understanding of application processes and requirements	• Improved school progression, attendance, performance and completion • Increased alternative credentials for entering HE studies • Increased university applications, offers and acceptances • Increased commencement of HE studies	• Y1-Y12 retention rates • School attendance rates • NAPLAN scores • ATAR track rates • ATAR scores • Rate of alternative credentials for HE studies • Application rate • Offer rates • Offer acceptance rates • Deferral rates • Measures for Year 1 enrolment
	Skills	• Improved soft and hard skills that support academic attainment in school and after school	• Measures of academic preparedness • Measures of non-cognitive skills, such as self-efficacy and time management • Attitudinal measures such as HE aspirations and expectations		
	Resources	• Improved opportunities for equity group members to realise academic potential at school • Enhanced resources to make HE study a viable option	• Measures of material resources of the student or their family • Measures of time use (e.g. time spent studying) • Attitudinal measures such as HE aspirations and expectations		
	Institutional development	• Improved equity sensitivity and practices in operations of educational institutions and associated processes (including the design and execution of HEPPP funded activities)	• Measures of equity awareness among staff • Measures of relevant professional development • Measures that capture applying best equity professional practice (e.g. in teaching, assessment, counselling, admissions processes)		
Participation & Attainment and Transition out	**Information & experiences**	• Increased knowledge/ awareness of enrolment procedures, university campuses, available services, academic standards/expectations (e.g. assignments), possibilities of subject selections and study options • Increased sense of belonging and social capital • Increased knowledge of labour markets, study-career trajectories, job application processes	• Measures of awareness in relevant areas • Measures of behaviours (e.g. use of available services) • Measures of engagement, integration and satisfaction of university students • Attitudinal measures such as expectations to complete HE and post-university plans	• Increased participation, retention, performance, progression and success • Increased completion and positive graduate destinations and outcomes	• Retention rate (year on year) • Success rate • Grades, GPAs • Degree Completion measures • Post-graduate study measures • Labour market destination and outcomes measures • Non-labour market outcomes measures (e.g. health and wellbeing)
	Skills	• Improved soft and hard skills that support academic attainment and employability	• Measures of academic preparedness • Measures of non-cognitive skills, such as self-efficacy and time management • Measures of employability skills and attributes		
	Resources	• Improved opportunities to realise academic potential • Enhanced resources to make HE study a viable option	• Measures of students' material resources • Measures of time use (e.g. time spent studying, working)		
	Institutional development	• Improved equity sensitivity and practices in operations of educational institutions and associated processes (including the design and execution of HEPPP funded activities)	• Measures of equity awareness among staff • Measures of relevant professional development • Measures that capture applying best equity professional practice (e.g. in program development, teaching, assessment, student services)		

Note: This table was created based on the outcomes within the System Map developed by Enzyme Consulting Group (presented in Appendix C), in addition to existing literature (e.g., Aitken, 2013; Australian Institute of Health and Welfare, 2014; Bennett et al., 2015; Centre for the Study of Higher Education, 2010; Chesters et al., 2018; Chesters & Watson, 2016; Christensen & Evamy, 2011; Curtis et al., 2012; Diamond & O'Brien-Malone, 2018; Harvey et al., 2021; KPMG, 2015; Pilkington & Lock, 2012; Pitman & Koshy, 2015; Pitman et al., 2016; Stirling & Rossetto, 2015; Thalluri, 2016; Thomas et al., 2014; Vernon et al., 2019; Vernon et al., 2017)

Table 20. Data Sources Relevant for Capturing Supporting Outcomes.

Stage	Relevant Indicators (examples)	Relevant data source (+ theme)	Data level	Data type	Access	Suitability for impact evaluation	Application
Pre-Access & Access	• Measures of awareness of educational pathways and HE study options	LSAY (aspirations and plans)	Individual	Sample survey	Easy	Low	Benchmarking only
	• Measures that capture understanding of how higher and further education is related to professions and careers	LSAY (access to career guidance)	Individual	N/A	N/A	N/A	Benchmarking only
	• Attitudinal measures such as HE aspirations and expectations	LSAY (aspirations and plans)	Individual	Sample survey	Easy	Low	Benchmarking only
	• Measures that indicate understanding of application processes and requirements	LSAY (aspirations and plans)	Individual	Sample survey	Easy	Low	Benchmarking only
	• Measures of academic preparedness	ATAR - State admissions centres/ State assessment authorities/ University Applications and Offers Data Collection	Individual	Admin	Difficult	High	Impact analysis
	• Measures of non-cognitive skills	LSAY (non-cognitive attributes)	Individual	Sample survey	Easy	Low	Benchmarking only
	• Measures of material resources of the student or their family	Linked ATO, SSRI, Census data (to assess family circumstances)*	Individual	Admin	Difficult	High	Impact analysis
		HILDA	Individual	Sample survey	Easy	Low	Benchmarking only
		LSAY	Individual	Sample survey	Easy	Low	Benchmarking only
		LSAC	Individual	Sample survey	Easy	Low	Benchmarking only
	• Measures of time use (e.g. time spent studying)	LSAY (time spent learning)	Individual	Sample survey	Easy	Low	Benchmarking only
	• Measures of awareness in relevant areas	LSAY (access to career guidance)	Individual	N/A	N/A	N/A	Benchmarking only
	• Measures of behaviours (e.g. use of available services)	LSAY (use of career guidance)					
	• Measures of engagement, integration and satisfaction of university students	SES	Individual	Population survey	Easy	Medium	Impact analysis
Participation	• Attitudinal measures such as expectations to complete HE and post-university plans	LSAY	Individual	Sample survey	Easy	Low	Benchmarking only
	• Measures of academic preparedness	SES	Individual	Population survey	Easy	Medium	Impact analysis
	• Measures of non-cognitive skills	GOS	Individual	Population survey	Easy	Medium	Impact analysis
	• Measures of employability skills and attributes	GOS	Individual	Population survey	Easy	Medium	Impact analysis
	• Measures of students' material resources	Linked ATO, SSRI, Census data*	Individual	Admin	Difficult	High	Impact analysis
		HILDA	Individual	Sample survey	Easy	Low	Benchmarking only
		LSAY	Individual	Sample survey	Easy	Low	Benchmarking only
		SES	Individual	Population survey	Easy	Medium	Impact analysis
	• Measures of time use (e.g. time spent studying, working)	LSAY	Individual	Sample survey	Easy	Low	Benchmarking only

Notes: * Additional data linkages would be required to capture level of material resources at the family level

Table 21. Data Sources Relevant for Capturing Primary Outcomes.

Stage	Relevant Indicators (examples)	Relevant Data source	Data level	Data type	Access	Suitability for impact evaluation	Application
Pre-Access & Access	Y1-Y12 retention rates	Enrolments (State data)	Individual	Admin	Difficult	High	Impact analysis
	School attendance rates	Attendance (State data)	Individual	Admin	Difficult	High	Impact analysis
	NAPLAN scores	NAPLAN (ACARA or State data)	Individual	Admin	Difficult	High	Impact analysis
		NAPLAN (ACARA or State data)	School	Admin	Moderate	Moderate	Impact analysis
		NAPLAN (via LSAC)	Individual	Sample survey	Easy	Low	Benchmarking only
	ATAR track rates	TACs	Individual	Admin	Difficult	High	Impact analysis
	ATAR scores	TACs	Individual	Admin	Difficult	High	Impact analysis
	Rate of alternative credentials for HE studies	TACs	Individual	Admin	Difficult	High	Impact analysis
	Application rate	TACs	Individual	Admin	Difficult	High	Impact analysis
	Offer rates	TACs	Individual	Admin	Difficult	High	Impact analysis
	Offer acceptance rates	TACs	Individual	Admin	Difficult	High	Impact analysis
	Deferral rates	TACs	Individual	Admin	Difficult	High	Impact analysis
	Measures for Year 1 enrolment	TSCI/HEIMS	Individual	Admin	Difficult	High	Impact analysis
		TACs	Individual	Admin	Difficult	High	Impact analysis
Participation	Retention rate (year on year)	TSCI/HEIMS	Individual	Admin	Difficult	High	Impact analysis
	Success rate	TSCI/HEIMS	Individual	Admin	Difficult	High	Impact analysis
	Grades, GPAs	SES	Individual	Population survey	Easy	Medium	Impact analysis
	Degree Completion measures	TSCI/HEIMS	Individual	Admin	Difficult	High	Impact analysis
	Post-graduate study measures	TSCI/HEIMS	Individual	Admin	Difficult	High	Impact analysis
		University data	Individual	Admin	Difficult#	High	Impact analysis
		HILDA	Individual	Sample survey	Easy	Low	Benchmarking only
		GOS, GOS-L	Individual	Population	Easy	Medium	Impact analysis
	Labour market destination and outcomes measures	GOS	Individual	Population	Easy	Medium	Impact analysis
		ATO	Individual	Admin	Difficult	High	Impact analysis
		SSRI	Individual	Admin	Difficult	High	Impact analysis
		Census	Individual	Admin	Difficult	High	Impact analysis
		LFS	Individual	Sample survey	Easy	Low	Benchmarking only
		LSAY	Individual	Sample survey	Easy	Low	Benchmarking only
		HILDA	Individual	Sample survey	Easy	Low	Benchmarking only
	Non-labour market outcomes measures (e.g. health and wellbeing)	MBS & PBS	Individual	Admin	Difficult	High	Impact analysis
		Census	Individual	Admin	Difficult	High	Impact analysis
		SSRI	Individual	Admin	Difficult	High	Impact analysis
		National Health Survey	Individual	Sample survey	Easy	Low	Benchmarking only
		GSS	Individual	Sample survey	Easy	Low	Benchmarking only
		LSAY	Individual	Sample survey	Easy	Low	Benchmarking only
		HILDA	Individual	Sample survey	Easy	Low	Benchmarking only

Note: # Access to own data is easy for each university, however access to data from multiple universities is considered difficult; * TACs and ACARA do not have data on applications made directly to universities

5.3.1.4 Accessing Data for QIEs

As outlined in the previous section, a number of sample surveys, including large-scale nationally representative surveys could be used to source the types of indicators that could assist with measuring the supporting outcomes. These surveys can also be used as a source of data to assess benchmark outcomes for certain groups and populations against which performance could be measured (such as estimating the proportion of low SES students in Year 12 in Australia who expect to go to university using LSAY data). However, as outlined earlier, robust QIE designs will typically require objective data on the primary outcomes, as outlined in Table 22. Much of this information is captured in administrative data collections held by various stakeholders, and this section highlights some of the key issues surrounding accessing this data.

Table 22 summarises key administrative data sources alongside with the primary outcomes they capture, structured as before by two broad phases of the student life cycle, grouping together Pre-Access and Access stages, and Participation and Attainment/Transition Out stages.

Table 22. Administrative Data Sources Capturing Primary Outcomes.

	Data source	Outcomes captured
Pre-Access and Access	Schools *(Government, Catholic, Independent)*	• Achievement, attendance • Retention, completion • ATAR subject selection • ATAR scores[#]
	State Peak sector bodies *(State Departments of Education; State Catholic Education Commissions; Independent Schools Associations)*	• Achievement, attendance • Retention, Y12 completion
	State authorities *(State curriculum and assessment authorities; State Tertiary Admission Centres)*	• Achievement; Completion • ATAR subject selection • ATAR scores • Applications & Offers
	National authorities/peak bodies *(NCEC, ISA, ACARA; NCVER; DESE)*	• Achievement (NAPLAN) • Attendance, Y12 completion, ATAR (school level) • Total VET Activity (TVA) data • Applications & Offers
Participation & Transition Out	Universities	• Commencements • Achievement • Retention, Success, Completion* • Post-graduate study*
	DESE (HEIMS/TCSI)	• Commencements • Retention, Success, Completion • Post-graduate study
	Other departments/agencies *(DSS, ATO, Health, ABS)*	• Employment outcomes • Income & wealth • Health outcomes

Notes: # Schools receive ATAR information for students who agree to share this data with their schools. * Universities only have data on completions and post-graduate study enrolments within the same institution

Pre-Access and Access stages

Much of the data relevant to the Pre-Access and Access stages is held by schools, including data on achievement (teacher report data; NAPLAN), attendance, retention, completion, as well as ATAR information (only for students who agree to share this data with their schools). For HEPPP-funded programs working directly with schools, e.g. outreach programs, it might be possible to negotiate access to this data directly with the schools involved for the purpose of QIEs. However, schools may not always be able to pass all of this data onto the evaluation teams. For instance, additional permissions might be required from relevant authorities, such as state Education departments when working with government schools.

The key data on school students is also held by the relevant state peak sector bodies: the State Departments of Education, state Catholic Education Commissions and state Independent School Associations so access to such data might be directly negotiated with these peak bodies. This will be typically required of evaluation designs that involve comparing students from across multiple schools (see Section 5.3.1.1); for those that only require data on students in a single school, it might be possible to negotiate access to the data directly with the school involved as noted earlier. Accessing data from state peak sector bodies would require a formal application and approval process, outlining the purpose of the evaluation project, the specifics of the data required, information about how data will be securely handled, and so on. It is typically much easier to obtain data on an aggregate school level, than data at an individual student level. However, the suitability of such data for rigorous QIEs of individual equity programs is limited, as discussed in Section 5.3.1.1. Alternatively, even if individual student data on outcomes were accessible, that data would typically need to be linked to individual-level data capturing participation in the particular HEPPP-funded program being evaluated. As outlined in Chapter 6, such linkage would need to be undertaken by a data integration authority authorised to perform data integration, and would typically require a complex and potentially prolonged process. For some intervention designs, such as those targeting all students in selected schools, it might be possible to use school-level data describing the schools targeted by a particular program, in conjunction with individual-level data on student outcomes obtained from the relevant state peak body, such as a State Department of Education. However, the feasibility of pursuing such a strategy would need to be undertaken by evaluation teams on a case-by-case basis as it would depend heavily on the parameters of a particular intervention and the context in which it was delivered.

The state curriculum and assessment authorities, such as the NSW Education Standards Authority (NESA) or the Queensland Curriculum and Assessment Authority (QCAA), and the Tertiary Admission Centres (TACs) hold data from across the Government, Catholic and Independent sectors. This opens possibilities for evaluating programs targeting schools across multiple sectors, or state-wide initiatives, such as those undertaken by the QWPC. The state curriculum and assessment authorities hold data supplied by schools, including data on achievement, senior secondary subject selection (including ATAR subjects) and Year 12 completion. TACs hold data on ATAR, as well as data on university applications and offers for school students applying via TACs. Compared with data held by universities (see further below), TACs store more detailed information on applicants and applications, including whether the applicant sought to use an educational access scheme. However, TACs do not provide information on students who apply directly to university. As with the state peak bodies, accessing data from state curriculum and assessment authorities or TACs would require a formal approval process. As before, it would typically be easier to access school level data than individual-student data. Such data can be used for analysing associations between certain parameters of programs and student outcomes at an aggregate level. An example of such analysis is provided by Zacharias et al. (2018) who analysed the effect of the intensity of school engagement with the outreach program on the application rates of Year 12 school-leavers. However, as discussed in Section 5.3.1.1, such data would be difficult to use for rigorous QIE of individual HEPPP-funded programs. On the other hand, leveraging individual-level student data would require linkages to individual-level data on program participation, which comes with significant complexities as outlined in Section 6.4.3 of Chapter 6.

National level data on outcomes pertaining to the Pre-Access and Access stages of the student life course can be obtained from the relevant peak bodies or national authorities. The National Catholic Education Commission (NCEC) and the Independent Schools Australia (ISA) collate data from schools across the Catholic and Independent sectors accordingly. The Australian Curriculum, Assessment and Reporting

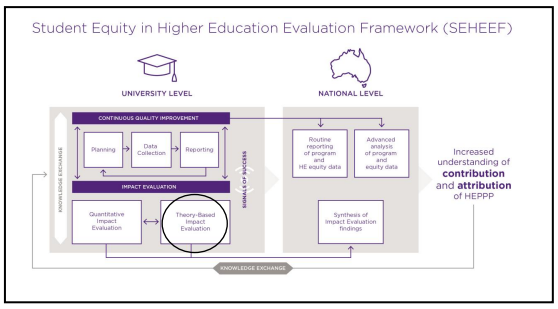
Authority (ACARA) collates selected data nationally, across all school sectors. However, much of this data – such as data on attendance, Year 12 completion and ATAR rates from ACARA – are only available at the school level. Such data can be linked to individual-level student records as exemplified in research by Li and Dockery (2014) who linked school data obtained from ACARA to first-year undergraduate data from an anonymous Australian university in order to study the role of school resources and school socioeconomic status in determining academic performance at university. However, as outlined earlier, the suitability of such data for QIEs of individual equity programs is limited, and would need to be assessed by a specialised team undertaking the evaluation. While some of the data relevant to the outcomes at the Pre-Access and Access stages, notably the data held in HIEMS/TCSI by the DESE, as well as the Total Vet Activity (TVA) data held by the National Centre for Vocational Education Research (NCVER), is available at the individual level, using such data for QIEs of individual equity programs would be subject to approvals and would require linking in data on HEPPP program participation at an individual student level. Such data linkage projects are likely to be time consuming and difficult, with the complexities outlined further in Section 6.4.3 of Chapter 6.

Participation and Transition Out stages

The biggest opportunities for immediate evaluation of university-level HEPPP-funded programs comes through leveraging data held by the universities themselves, including data on commencements, student achievement, retention, success, completion and enrolment in post-graduate studies. It is worth pointing out that the completion and post-graduate study enrolment will only be visible so long as the student completed their degree or enrolled into a post-graduate study, within the same university. Still, the university-held data offers the most straightforward way of accessing key outcome data that would support QIEs of HEPPP-funded programs delivered at the Participation and Attainment/Transitions Out stages – so long as an appropriate control group could be constructed using data from the same university, which will depend on the intervention design (see Section 5.3.1.1). Individual-level information on participation in the HEPPP-funded programs being evaluated would need to be merged with the individual-level outcome data but this should be a relatively straightforward process for universities to undertake. In fact, some universities already link such information as part of their routine performance management and analysis processes. For others, the tools introduced in the earlier sections of this Chapter should provide a good basis for capturing this information, while ensuring a standardised and consistent format for this data across the sector.

As noted earlier, DESE holds data in their HEIMS/TCSI collections capturing a number of key outcomes relevant to Participation and Attainment and Transitions Out stages, including standardised (across the sector) measures of university enrolments, retention, success, completion and post-graduate study enrolments. While access to this data could potentially by negotiated with DESE by individual universities, the feasibility of leveraging this data in the context of QIEs of equity programs run by individual universities is currently unclear. This is because, as outlined earlier, there is currently no standardised information about participation in equity programs captured in these systems. As such, these data resources would be much more suited to undertaking national-level evaluation of HEPPP-funded programs (and the HEPPP overall), as outlined in Chapter 6. This also applies to administrative data capturing outcomes relevant to programs delivered at the Attainment and Transition Out stage, including employment outcomes, data on income and wealth or health outcomes of university graduates. While this data could in principle be accessed and linked to university data (subject to relevant processes and approvals, as outlined in Chapter 6) for the purpose of supporting QIEs undertaken by individual universities, the feasibility and utility of doing so would need to be assessed by the specialised evaluation teams undertaking these evaluations. Most likely though, such data linkages would be most productively leveraged at a national level, as outlined in Chapter 6.

5.3.2 Theory-based Impact Evaluation



Unlike QIE, the primary purpose of TBIE is not to produce precise estimates of a program's effect size. Instead, TBIE approaches are focused on mapping out the causal chain from a program's inputs to outcomes and providing robust empirical analyses that can explain them. This is particularly important for programs being delivered in complex, real-world settings, where the impact of a program can depend on a multitude of contextual factors (Skivington et al., 2021). The focus of TBIE remains on establishing whether a program is likely to have caused the observed outcomes. However, there is more explicit recognition that the program is likely to be a 'contributory cause'. This contrasts with the attribution framing inherent in QIE approaches (i.e. that the program is the primary cause of a specified primary effect). Theory-based approaches to evaluation attempt to understand a program's contribution to observed outcomes through a generative[11] or process interpretation of causation, rather than determining causation through comparison to a counterfactual.

> *"…we are not seeking to establish causality through statistical tests of correlations but by a 'burden of evidence' that supports logically coherent chains of relations that emerge through the contrasting and comparing of findings from many relevant and extant forms of evidence* (Baum et al., 2014, p i135)

TBIE approaches are therefore an important consideration in the context of evaluating HEPPP-funded projects. A recurring and salient point made in previous frameworks and reviews (Burke et al., unpublished; Centre for the Study of Higher Education, 2010), as well as in the stakeholder consultations, is the importance of context. Equity group members are often exposed to multiple equity initiatives, alongside external factors such as changes in governmental policy and changes to their own personal circumstances. Disentangling the potential effect of such factors and isolating the contribution of a specific program requires thorough testing of the program's logic against other plausible explanations i.e. exploring the causal chains thought to bring about change by a program. As noted in the HM Treasury (2020b, p43), "*For many of these (theory-based) methods, the aim is not to provide definitive evidence that the entirety of any measured change can be attributed to the intervention. Rather, they aim to explore whether the intervention definitively contributed to the measured change"*.

There are several different TBIE designs, but they each share some common factors. As noted above, TBIE designs rely on generative causation, which means they seek to understand the mechanisms explaining observed effects. They also generally rely on a two-step process: an initial conceptual phase followed by an empirical stage (Mohammed & Bladon, 2017).

Conceptual phase

The conceptual phase of TBIE approaches involves the development[12] of a Theory of Change. A Theory of Change describes how an intervention is proposed to bring about intended outcomes. It is often used interchangeably with the term Program Logic. However, a good Theory of Change provides a fuller explanation of the mechanisms underpinning the boxes or stages presented in a Program Logic; it doesn't just describe the sequence of expected short and longer-term outcomes flowing from activities, but also how and why these outcomes will occur, including any assumptions that have been made.

The development of a Theory of Change can draw on multiple sources including prior research, program documentation, observations or evaluations of similar programs, and the perspectives of program planners and staff. It is recommended that a diverse mix of stakeholders is involved in developing a 'plausible, doable,

[11] Generative causation refers to the identification of the mechanisms and contexts that explain outcomes.
[12] Or refinement in cases where a theory of change or logic model has been developed during the program planning phase.

and testable' Theory of Change to determine the intended outcomes of the program, potential unintended outcomes, and the influence of contextual factors (Rogers, 2012). If possible, the voices and experiences of intended beneficiaries should be included and represented as part of the co-development process.

Empirical phase

As well as providing a clear articulation of how a program is expected to work, and the contextual factors and assumptions that the theory depends upon, a Theory of Change also provides a conceptual framework for designing the data collection methods needed for evaluation. The Theory of Change is validated (or challenged) based on collecting evidence that tests its assumptions and potential alternative explanations. Importantly, TBIE are 'methods neutral' (Skivington et al., 2021). In other words, they do not favour one method over another and can incorporate a range of methods considered most appropriate in the context of the program, its participants, and the evaluation questions being asked. Typically, however, they require mixed-methods approaches drawing on both qualitative and quantitative data collection activities. Although presented separately in Figure 10, this means that TBIE can incorporate QIE; indeed, they will often be strengthened in doing so (White, 2009). However, the results from the QIE are considered alongside other types of evidence to establish the causal story.

Regardless of the specific methods used, the level of confidence in the causal claim depends on the level of detail in the evidence collected. This can be structured through the use of specific TBIE designs, the most common of which are Contribution Analysis, Realist Evaluation, and Process Tracing. A summary of each of these methods is provided in Table 23; more detailed descriptions can be found elsewhere (HM Treasury, 2020b; Stern, 2015; Westhorp, 2014).

Table 23. Common Designs used in TBIE.

Contribution Analysis	A theory-based approach to verify the contribution a program has made to a change or set of change by exploring a range of evidence. In Contribution Analysis, it is proposed that it is reasonable to conclude that an intervention is contributing to outcomes if: • There is a reasoned Theory of Change. • The activities were implemented as intended. • The Theory of Change (or key elements) is supported and confirmed by evidence and the chain of expected results occurred and has not been disproved. • Alternative explanations and other contextual factors that are known to affect the desired outcomes have been assessed and either shown not to have made a significant contribution or their relative role acknowledged. (Step 2 in the above process highlights the connection between CQI and Impact Evaluation alluded to earlier in this chapter.) A particular advantage of contribution analysis is that many of the steps can be undertaken in a participatory mode (Mayne, 2008).
Realist Evaluation	Realist evaluation is specifically focused on understanding what works, in what situations, for whom and why. As noted in the Magenta Handbook Appendix (HM Treasury, 2020a, p5), it is based on the premise that "*understanding why a participant decides to take advantage of a programme (or not) is key to causal inference and is known, in Realist terms, as the 'mechanism'. Realist evaluation recognises that context determines how, or if, this causal mechanism operates*." A set of specific context-mechanism-outcome (CMO) statements are identified and articulated based on prior research, knowledge and experience and then tested and refined based on the evidence collected during the evaluation. Statements are broadly structured as follows: *"In this context, that particular mechanism fired for these actors, generating those outcomes. In that context, this other mechanism fired, generating these different outcomes." (Better Evaluation, 2016, para. 15)*
Process Tracing	Process tracing is a structured case-based approach to drawing causal claims about how a particular outcome(s) has arisen. It involves identifying possible causal mechanisms through developing a Theory of Change. These causal mechanisms are then tested by collecting evidence that would only be present if a particular causal theory were true or false. These so-called causal tests are characterised as follows: • **Straw in the wind**, which lends support for an explanation without definitively ruling it in or out. • **Hoop**, failed when examination of a case shows the presence of a necessary causal condition, when the outcome of interest is not present. Common hoop conditions are more persuasive than uncommon ones. • **Smoking gun**, passed when examination of a case shows the presence of a sufficient causal condition. Uncommon smoking gun conditions are more persuasive than common ones. • **Doubly definitive**, passed when examination of a case shows that a condition provides both necessary and sufficient support for the explanation. These tend to be rare. The above description of the causal tests is taken from BetterEvaluation where further information on the approach can be found (Westhorp, 2014).

5.3.3 Prioritisation of Programs for Impact Evaluation

It is suggested that the CQI activities set out in earlier sections of the SEHEEF are undertaken by universities across all of their HEPPP-funded programs. These activities are characterised by their primary purpose (accountability, learning, and/or development) and their requirements for relatively low levels of evaluation expertise.

As part of the SEHEEF, universities are provided with guidance to prioritise and select programs to undergo more advanced evaluation activities, including QIE and/or TBIE. Impact evaluations are crucial for obtaining a robust measure of the impact of a program on target beneficiaries, and for understanding why and how particular outcomes are brought about. They enable an understanding of what works, for whom, in what circumstances, how and why.

These evaluation approaches are resource-intensive, requiring strong expertise in evaluation design, theory, and methods. In most cases, they are likely to require specialist evaluators. This expertise should be sought from within the university sector and, where feasible, from within the same university. It is important that universities adopt a systematic and defensible approach for selecting programs to undergo quantitative impact and/or theory-based evaluations.

A standard set of criteria can be used by universities to make an informed assessment of what programs they will expose to impact evaluation, and why.

Table 24 provides criteria that universities should consider when prioritising programs for Impact Evaluation. Applying these criteria to all HEPPP-funded programs within a university will enable a shortlist to be developed. This shortlist can then be stratified according to broad program characteristics such as the student life stage at which the program is implemented, program size (defined as % of overall HEPPP funding) and the primary equity group targeted. This is important to ensure that there is a variability in the programs selected for impact evaluation.

Where possible, impact evaluations should include QIE, either as the only approach, or embedded within a TBIE. As such, there is a specific criterion pertaining to QIE feasibility. If administrative data to enable QIE are not available, an in-depth theory-based evaluation should be considered. Ideally, programs will undergo TBIE which incorporates QIE as this will provide the most instructive evaluation findings.

Prioritising programs is ultimately a matter of judgment. Universities may wish to develop a tool for the calculation of a prioritisation score to support decision making, such as the example provided in Box 9 on page 112. It is important to note that universities must consider the amount of funding that it will allocate towards evaluation. Programs that have substantial budgets, are complex, large-scale, of strategic significance or high risk will typically have a larger budget for evaluation. The implications of adequately resourcing evaluation on both the distribution of funding to universities, and the management of funding by universities, is a key consideration during the implementation phase of the SEHEEF.

An indication of the selected programs, and the rationale for their selection, may be provided in the CQI Planning Tool. This will enable a registration process of HEPPP-funded projects, as discussed in the next section (see Section 5.3.4).

Table 24. Criteria to Support the Prioritisation of Programs for Advanced Evaluation.

Criteria	Description	Prompts to guide prioritisation
Program maturity	This concerns the extent to which the program is new and innovative or a continuation of an already established program.	• Is this a new and previously untried project? • Is this program similar to other programs you have delivered or are delivering? • Does the program contain innovative approaches? • Is there uncertainty about program outcomes? • For how long has this program been delivered? • Has the implementation and impact of this program been evaluated before?
Program profile	This concerns the profile of the program in terms of: • Program cost • Number of participants • Number of partners and stakeholders involved • Stakeholder importance	• How many participants will be involved in this program? • To what extent are partners and stakeholders involved in this program? • What is the total cost of the program, including staff and non-staff costs? • How does the cost of the program compare to other HEPPP-funded programs being delivered by the university? • Is this program deemed of high importance within the university and to other stakeholders?
QIE feasibility	This concerns the availability of data that facilitates robust QIE: • data on participation in HEPPP activities; • data on equity characteristics of participants and non-participants (for generating control groups); • data on relevant outcomes for participants and potential control groups	• Can the collected data reliably identify who has participated in a HEPPP-funded activity (and when and in which way)? • Has there been enough time for primary outcomes to accrue and become measurable? • Is there reliable data available on such outcomes for each participant but also for potential control groups? • Do sizes of participant and potential control groups allow robust estimates of differences in outcomes?

Box 9. Example Prioritisation Scoring Tool for Selecting Programs for Impact Evaluation.

Prioritisation Tool

Scenario

Program A accounts for the highest share of University X's HEPPP allocation. It is a relatively new program, having only been implemented for the first time 2 years ago. It is delivered to a large number of students and uptake has been good. The program's design has been informed by available evidence, but it also contains some innovative elements and some of the underlying theory is speculative. The program steering committee involves numerous senior leaders from the University and the number of external stakeholders involved in supporting the program has grown year-on-year. Monitoring of student progression suggests the program is making a difference; however, no formal evaluation has been conducted. The university collects data on the student ID of program participants and this can be linked to outcomes on the university's main data system.

Step 1: Determine whether there is a need for Impact Evaluation
(by discussing the criteria of Program Maturity, Program Profile and QIE)

If there is a clear need for Impact Evaluation, please complete Step 2 to prioritise the evaluation of the program against other programs.

If there is not an identified need for Impact Evaluation, the program will be assessed using the continuous quality improvement activities.

Step 2: Calculate a prioritisation score

	Yes (2)	To some extent (1)	No (0)	
Program profile				
The amount of HEPPP funding for this program high compared to others within the university	2			
The program reaches a high number of participants / students compared to others in the university	2			
HEPPP is the main funding source for this program	2			
The program involves a large number of internal and external stakeholders/partners	2			
			Subtotal	**20**
Program maturity				
The program has not been evaluated before	2			
There is uncertainty about the program's impact on intended outcomes		1		
There is uncertainty about how the program will bring about its intended outcomes		1		
There is a lack of evidence to support the program's design		1		
			Subtotal	**12.5**
QIE feasibility				
It is likely possible to undertake QIE of the program	2			
			Subtotal	**20**
			TOTAL	52.5 / 60

Note: Each prioritisation category accounts for an equal weight. Category subtotals have been calculated by totalling the category score, dividing by the number of items, and multiplying by 10.

5.3.4 Registering HEPPP-Funded Projects Selected for Impact Evaluation

A national registry of HEPPP projects that have been selected for IE would facilitate the monitoring of evaluation activities across the sector, providing information about the features of the projects that have been selected for IE, and basic information about the proposed evaluation design. Monitoring the features of the HEPPP-funded projects selected for IE could inform future mechanisms of selections for IE, by identifying the types of HEPPP-funded projects that have received relatively little priority for being selected for IE. Monitoring of the features of the IE evaluation designs could inform future evaluation directions and support best practice evaluation approaches for different project features.

A registry of HEPPP-funded evaluation activities could also facilitate knowledge exchange between universities by alerting individual universities to past, current and future evaluation activities in relation to different types of HEPPP projects. Such information could contribute to initiating/developing collaborative exchanges surrounding the implementation of IE throughout the sector.

For the registry to facilitate the above potential benefits it would need to:

- contain relevant (and largely standardised) information on project and evaluation features;
- be accessible to individual universities;
- be searchable (e.g. according to the features of HEPPP projects and evaluation design);
- (ideally) be regularly updated; and
- (ideally) have a tabulation function.

Table 25 lists the information that could be accessible from a national registry of IE activities. Information on HEPPP projects selected for IE is already collected as part of the CQI Planning Tool. In fact, the CQI Planning Tool already indicates which HEPPP projects are marked for IE. The registry would already have some functionality if it only included the details of the selected projects, which can be derived from the CQI Planning Tools. This would allow monitoring of what types of HEPPP projects receive more or less evaluation attention, and it would allow DESE and universities to identify which kind of projects have been, are being, or are planned to be evaluated. Search and tabulation functions would enhance the efficiency with which projects with particular features could be identified and would facilitate analysis of sector-wide patterns in the selection of HEPPP projects.

The utility of the registry would be further enhanced if it allowed access to information about the IE design. A draft of IE relevant information that could be of interest to stakeholders is included in Table 25.

The relevant rows are all highlighted in grey (including the Project ID row) to indicate the information that would need to be provided by universities for the national registry. Table 25 also indicates potential for further standardising information for the registry across the HE sector in the second column. Where this is indicated for information under the HEPPP project details heading, this should be pursued in conjunction with updating the tools for the CQI Planning and Reporting Tools in the future. In general, the implementation of the QIE registry can be undertaken in stages over time, with every stage adding utility for stakeholders.

The registry would need to allow editorial access by individual universities to provide updates on the evaluation status, features of the QIE and/or evaluation findings for individual HEPPP projects over time.

Table 25: Relevant Information for National Registry of HEPPP Impact Evaluations

Information	Format/examples/notes
HEPPP-funded project details	
Project ID	Standardised format
Project name	Open format
Project start date	Standardised format
Project end date	Standardised format
Intervention stage (student stage)	SEHEFF standardised stages
Type of activity(ies)	SEHEEF Standardised types
Sub-type of activity(ies)	Open format *(potential for later standardisation*)
Target group(s)	Partial standardisation (based on equity groups)
Intended outcomes	Partial standardisation plus open format
(Lead) University	Standardised list
Description of project	Open format
Evaluation details	
Year selected for IE	Standardised date format
Key evaluation questions	Open format *(potential for later partial standardisation*)
(Intended) Evaluation period	Standardised date format
Evaluation status	e.g. commissioned, started, completed *(potential for later standardised more detailed status options*)
Considered cohorts/groups	e.g. low SES students who commenced undergraduate studies in 2019 or 2020 at university X (*potential for later partial standardisation)*
Key outcome measures	e.g. probability of continuing studies in second year, median end of Year GPA (*potential for later partial standardisation*)
Evaluation/analysis design	e.g. quasi experimental design [comparisons of intervention cohorts with 2017/18 commencing student cohorts at uni x] (*potential for later partial standardisation*)
Evaluation findings (if applicable)	Open format
Evaluator	Open format

The table assumes the registry will capture and make available information for Information & Experiences, Skills, and Resources types of activities. Institutional Development type of activities are assumed to be out of scope for the registry and IE. Information highlighted in the table would need to be centrally collected from universities. Information not highlighted is already available/could be imputed from previously submitted information contained in the CQI Tools.

6. National Level Evaluation

- This chapter distinguishes the different evaluation components of the SEHEEF for the evaluation of HEPPP at the national level, and the benefits of the components.

Routine reporting of program and equity data:

- This component offers regular and transparent reporting of HEPPP-funded programs.
- Currently, the routine publication of data on student equity performance indicators provides the Higher Education sector with information on access, participation, retention, success and attainment. This should continue.
- These data could be complemented with sector level data on the number, reach and characteristics of HEPPP funded activities, via the SEHEEF Data Reporting Tool.

Analysis of program and equity data:

- This component has the benefit of providing an overall assessment of the impact of HEPPP at the sector level, and assessing the effectiveness of different types of programs within different student life stages.
- Options to record students participating in HEPPP programs at the National level include:
  - a HEPPP flag, capturing information about individual HEPPP-funded programs and information characterising HEPPP-funded programs;
  - leveraging data from the proposed WPLS;
  - QIEs of equity program participation at a national level, capitalising on the outcome data already captured in the university systems and using relevant comparisons and/or control groups, and
  - linkages of HEPPP program participation to HEIMS/TCSI data, linkage of additional outcomes at the Participation and Attainment stages and expanding to Pre-access and Access stages.

Synthesis of university-level quantitative and TBIE findings:

- The synthesis of university-level quantitative and Theory-based Impact Evaluation findings can assess the magnitude, variation and consistency of effects across the interventions and shed light on observed differences in findings between programs.
- It could involve quantitative meta-analytical approaches, qualitative synthesis and mixed-method syntheses.

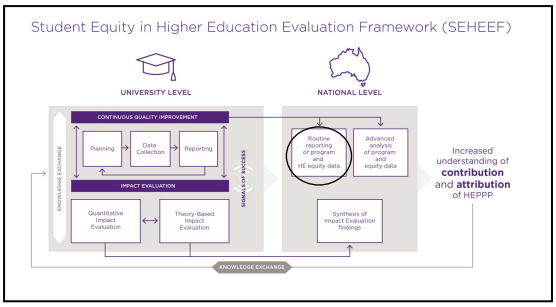
6.1 Chapter Introduction and Outline

The previous chapter discussed the evaluation components of SEHEEF that are applicable to the university level. The purpose of this chapter is to discuss the national level evaluation components of SEHEEF. This includes the key evaluation questions (see Section 6.2), the routine reporting of program and equity data (see Section 6.3), the analysis of program and equity data (Section 6.4), the data infrastructure to support national evaluations (Section 6.4.3), as well as the synthesis of Impact Evaluations (Section 6.5). This chapter also provides a discussion on the sharing of knowledge and expertise in the HE equity evaluation area (Section 6.6).

6.2 Key Evaluation Questions

Key Evaluation Questions help to crystallise the purpose of an evaluation (see Table 26). Feedback on a preliminary set of Key Evaluation Questions, pitched at the national level, was provided during the initial stakeholder workshops (see Box 3 on page 45). A revised set of Key Evaluation Questions is provided, categorised according to an Appropriateness, Effectiveness, Efficiency and Learning typology, and mapped against the components in the SEHEEF. The Department should consider what sub-questions it would wish to prioritise for answering the main Key Evaluation Questions.

6.3 Routine Reporting of Program and Equity Data



Data on student equity performance indicators are currently published annually by the Department as part of their Higher Education Student Data Collection (DESE, 2020b). The Equity Tables include equity group data on access, participation, retention, success and attainment, which align with many of the primary outcomes in the HEPPP Program Logic. The routine publication of these statistics provides the Higher Education sector with ready access to sector-wide information. Furthermore, the National Centre for Student Equity in Higher Education uses the data to produce a suite of interactive resources, including a data dashboard, that enable trends and patterns to be visualised at the institutional and national level. These also inform an annual Equity Student Briefing Note (National Centre for Student Equity in Higher Education, 2020).

It is expected that these resources will continue to be published. However, consistent with ACIL Allen's recommendation, it is suggested that these data be complemented with sector level data on the number, reach (by equity group) and characteristics (e.g. activity type, system level) of HEPPP funded activities delivered each year (ACIL Allen Consulting, 2017). This will enable regular and transparent reporting on key attributes of HEPPP funded programs. This will be made possible through the systematic collection and reporting of data by universities through the implementation of the CQI Program Data Reporting Tool proposed in the accompanying Guidance Manual.

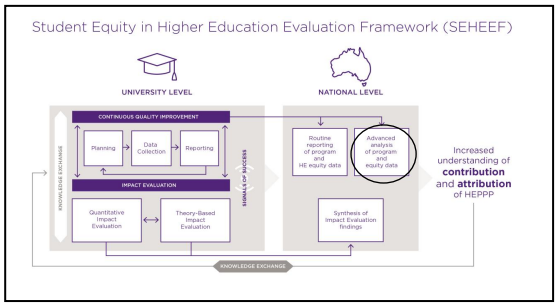
In addition to the focus on indicators of access, participation, retention, success and attainment, previous frameworks have proposed routine reporting of a broader range of indicators. For example, the Towards a Performance Measurement Framework for Equity in Higher Education published by the AIHW (2014) suggested a comprehensive set of 61 indicators of institutional and system-wide performance organised into 3 tiers (educational attainment and outcomes; precursors of higher education attainment; education system performance). These indicators include measures that would span across the HEPPP Program Logic, from resources used and activities delivered to supporting and primary outcomes achieved. Pitman and Koshy (2015) also proposed a 3-tier model in their Framework for Measuring Equity Performance in Australian HE in which they identified 28 indicators mapped to Context (pre-university); Performance (at university); and Outcomes (post-university). The majority indicators relied on existing data sourced from key stakeholders.

The outcomes and indicators identified in these Frameworks are similar to those presented in the SEHEEF. Indeed, those based on administrative data collected by schools and universities will be the basis of QIE (Section 5.3.1.2). The intention of these previously published performance management frameworks was to provide a set of indicators that would form the basis of routine compilation and reporting of statistics across all stages of the student life course. This would serve an important purpose, and provide trends on the 'bigger picture' of equity performance in HE (notwithstanding issues such as the consistency of definitions of equity groups at different student life stages (Pitman & Koshy, 2015). However, this would be a large undertaking with substantial resource implications. In the context of the SEHEEF, it is therefore proposed that, instead of routine reporting of a broad suite of indicators, prioritisation is given to implementing those components that support continuous quality improvement and impact evaluation at the university level, and impact evaluation at the national level.

Table 26. Key Evaluation Questions to Guide SEHEEF.

	University Level			National Level		
	CQI	Impact evaluation	Knowledge exchange	Routine Reporting	Advanced analysis	Synthesis of Impact Evaluations
Appropriateness						
How is HEPPP funding being used by universities?	X			X		
How well did program and activities funded under HEPPP align with its overall objectives?	X			X		X
How well are HEPPP funded programs and activities reaching the intended participants?	X			X		
How well are HEPPP funded universities implementing the SEHEEF?	X		X			
Effectiveness						
To what extent did the HEPPP produce or contribute to improved student equity outcomes?		X			X	X
For whom, in what ways, in what circumstances and how?		X				X
What features of HEPPP-funded programs and their contexts that made a difference?	X	X				X
What unintended positive and negative outcomes have been produced by the HEPPP?		X				X
Efficiency						
How efficiently is HEPPP funding being used by universities?	X					
Learning						
What lessons have been learned from the implementation of the HEPPP?	X		X			
How well have these lessons been incorporated, shared, and embedded for improvement?	X		X			

6.4 Advanced Analysis of Program and Equity Data



In addition to the QIEs being conducted on programs at the university level, analysis of quantitative data at the sector level has the potential to provide an overall assessment of the impact of HEPPP. Such an approach was attempted by ACIL Allen Consulting (2017) who used interrupted time series analysis to estimate the change in primary outcomes during a time period that incorporated HEPPP funding (2010-14), compared with an earlier time period that did not (2005-2009) (i.e. the counterfactual). However, other notable policy and contextual changes occurred in the HE sector during the HEPPP time period and so specific attribution of observed outcomes to the HEPPP was not possible. In this section, a range of opportunities for advanced analysis of quantitative data is presented, drawing on both planned and potential data advancements. These advancements vary in their short-term feasibility but provide the basis for a continued focus on enhancing the HE data architecture for the purposes of national evaluation of HEPPP.

Some of the options discussed in this section effectively amount to an impact assessment at the national level. This was noted in Chapter 5, in the discussion on QIEs of university-run HEPPP-funded programs. Significant parts of the methodological considerations described in Section 5.3.1.1, including considerations around identifying control groups and intervention designs, capturing outcome data, and applications of specific statistical methods will also apply to national-level impact evaluations.

6.4.1 Leveraging Data from the Widening Participation Longitudinal Survey (WPLS)

The WPLS is planned to be included in the proposed new Post-School Destination Survey (PSDS) (Murphy et al., 2021; Norton & Edwards, 2021). The survey will track young people starting from their final school years and into further education and work. WPLS will focus on the HE participation of students from currently underrepresented groups.

The study's main goal is to improve understanding of educational disadvantage over the student life course and to shed the light on the relevance of interventions that aim at removing or lowering barriers to positive educational and career outcomes for equity group members. This will be achieved by relating the information on student outcomes to the information about the (self-reported) data on equity interventions they had participated in. However, the study will focus on the types of interventions as well as their intensity, rather than on evaluating individual programs.

The survey will put much more emphasis than earlier studies on collecting data on various activities commonly used as equity interventions. There are plans to distinguish four broad types of interventions, 1) increasing aspiration for university education, 2) facilitating the transition to university, 3) facilitating success in HE including interventions directed at academic problems and interventions directed at financial issues, and 4) facilitating the transition to work.

To measure the success of the interventions, the study will collect data on relevant outcomes. Multiple measures might form evidence about the role of interventions, and these measures might change depending on the stage in a student's life course. Some of the information could be sourced from linked administrative data. For example, interventions' effects on aspirations could be (indirectly) measured using data on taking subjects that allow entering HE and academic results in first waves and with university applications at later stages. However, there will be outcomes that cannot be captured in any other way but by asking survey questions. These include questions on young people's future plans, or on interest in pursuing university studies, which are needed to directly evaluate intervention's impact on aspirations. Moreover, the survey instrument will include questions regarding knowledge of and access to various sources of potential assistance aiming at reducing barriers to commencing tertiary education. To assess interventions aiming at fostering success in HE, the survey will collect information on grades, academic activities, aspects of student

experience, the intention of dropping out, as well as on financial situation and financial assistance. Finally, respondents will be asked about assistance in making the transition to work as well as postgraduation outcomes, chiefly labour market outcomes. The questions about access to various forms of assistance will be followed by another one about the intervention's helpfulness.

The survey will not be the only source of information. The authors of the study suggest using linked administrative data wherever possible to reduce survey burden on the respondents. Potential data linkages have been organised into two groups. The first group, recommended data linkages, includes datasets that enable reconstructing complete educational trajectories of students starting from early childhood development measures, through school achievement, to postsecondary education:

- The Australian Early Development Census (AEDC)
- NAPLAN results
- Senior secondary school subjects sourced from state education authorities
- Vocational sector information, from the National VET Provider Collection
- Undergraduate applications and offers as well as student data extracted from Tertiary Collection of Student Information (TCSI)

The second group, labelled additional data linkages, includes Tertiary Admissions Centres' (TACs) and universities data that might provide additional information but are more challenging to access (see also Section 6.4.3.1 for a discussion of issues related to data availability and access).

The design of PSDS-WPLS means that other potential data sources such as MADIP, Student Experience Survey (SES) or Graduate Outcomes Survey (GOS) are not recommended for linkage to WPLS. The reasons include the fact that access to MADIP data is restricted, and in case of SES and GOS, the timing of the surveys and missing cases are the biggest issues limiting their usefulness in the context of the PSDS-WPLS study.

Previous LSAY and LSAC experience suggest that proposed linkages to WPLS are feasible. The implementation of USI should result in further improvement of linkage rates. However, due to a possible lack of participants' consent for linkage and limitations of the process, data coverage might be incomplete. These concerns resulted in a hybrid approach, whereby core data are collected by the survey instrument but are further supplemented by administrative sources.

Altogether, WPLS offers good potential – particularly once additional administrative data are linked in – for assessing the relevance of certain *types* of equity projects, including their intensity and other characteristics, such as activity types. However, as is the case with any other sample survey, it will not be possible to use WPLS for the purpose of evaluating individual HEPPP-funded programs or activities. To enable rigorous quantitative impact evaluation of the individual HEPPP-funded programs, and the HEPPP overall, administrative data will need to be leveraged, as outlined in the subsequent sections.

6.4.2 Estimating Impact of the HEPPP and HEPPP-funded Programs

As described in detail elsewhere in the report (Section 5.2.2.2), there is currently no information recorded in the university data collections held by the Department (HEIMS/TCSI) that would allow flagging students participating in equity programs or activities. A process would need to be agreed on to support such routine collection of such information, and relevant privacy and ethical considerations would need to be undertaken, as outlined in Section 6.4.3.1. The issues around data privacy were also raised by stakeholders in consultations on the draft Evaluation Framework (see Chapter 7), as was the lagging nature of data at a national level, which would be further exacerbated by data linkages (see Section 6.4.3.2). However, as discussed further in this section collecting such data would have considerable benefits in terms of the ability to systematically establish impacts of the HEPPP and HEPPP-funded programs on relevant outcomes at the sector level.

There are a number of primary outcomes readily available in the HEIMS/TCSI data that pertain the Participation and Attainment & Transition Out stages, which could be used to estimate the impact of the HEPPP and HEPPP-funded programs, including:

- First Year retention;
- Retention in later years;
- Success (year on year);
- Completion of undergraduate degree (including time to completion);
- Enrolment in post-graduate studies.

Furthermore, additional outcomes could be added in the future using data linkages, as outlined further in Section 6.4.3.2, while noting the potentially considerable lead times due to the complexity associated with the data integration processes.

The type of analysis that will be possible in relation to the outcomes outlined above will depend on the type of information on HEPPP project participation that is available in the data systems. The below options briefly outline possible analytic applications, depending on what data is available on HEPPP project participation.

Option 1: HEPPP flag

A minimum option to support system-wide analysis of the impact of HEPPP-funded projects would require a flag to be included in routine data collections provided by universities to the Department identifying students who have participated in any HEPPP-funded project. This information could be provided on annual – or preferably – semester basis, similarly to the way enrolment data is currently provided at the student level.

Adding this single piece of information would immediately enable a sector-level analysis of an overall impact of the HEPPP-funded projects on the key outcomes listed above. Analytically, this would be conceptually parallel to Intervention Design 5 in outlined in Section 5.3.1.1.2, except that it would be applied at the system rather than university level. That is, HEPPP participants would be treated as the case of selected students participating in an intervention, whose outcomes could be analytically compared to similar students who did not participate in HEPPP-funded projects. As in Intervention Design 5 outlined Section 5.3.1.1.2, selection into the HEPPP-funded projects would need to be taken into account, such as through the use of matching techniques. Both individual-level and institution-level characteristics could be used for the purpose of statistical adjustments in the modelling.

As further described in Section 5.3.1.1, the specific analytic techniques would depend on the nature of the outcome variables being analysed. For the outcomes that are best conceptualised as point-in-time outcomes in terms of individual student trajectories, such as degree completion or enrolment into post-graduate studies, analytic options outlined under Scenario 3 in Section 5.3.1.1.2, such as Propensity Score Matching or Inverse Probability of Treatment Weighting (IPTW) could be used to estimate causal impact of participation in a HEPPP-funded program on the relevant outcomes. For outcomes that could be observed at multiple time points (pre- and post-HEPPP participation), such as the success rate, options under Scenario 4 in Section 5.3.1.1.2 would be applicable, including difference-in-difference estimation.

The inclusion of a HEPPP-participant flag would also support additional analyses that could be undertaken in order to gather better intelligence about the HEPPP program as a whole. For instance, student-level and institution-level characteristics associated with increased participation in a HEPPP-funded projects could be analysed to inform future program design and to identify groups of students that could be missing out on participation in HEPPP projects.

Option 2: Information identifying individual HEPPP-funded programs

A slightly more comprehensive option would involve collecting information identifying the specific HEPPP-funded program, such as the program name or unique Program ID assigned by universities (See Section 5.2.2.3 for an example of such a data system). This data could be provided to the Department by universities in a form similar to the way data on enrolments in study units is currently provided (i.e. multiple data rows per

student). The same way as students can enrol in multiple units over the course of academic semester, they can potentially participate in multiple HEPPP-funded programs. This participation can also change over time so this data should be provided on an annual or – preferably – on a semester basis.

Under this option, the analytic options would be significantly expanded. While all the analyses possible under Option 1 could still be performed by aggregating program-specific information to an overall flag at the student level, being able to identify specific HEPPP-funded projects in the sector-level data would have two main benefits.

First, Option 2 would facilitate a good system-level overview of the reach of different programs and the overlaps between them. Specifically, this information would enable for the number of students participating in multiple HEPPP-funded programs to be quantified and analysed in relation to the individual-level and institution-level characteristics. The characteristics of students who participate in multiple HEPPP-funded programs could be analysed to inform future program designs.

Secondly, in addition to the overall effect of participation in HEPPP-funded programs as per Option 1, Option 2 would also enable assessing the relative effect of different HEPPP-funded programs on the relevant outcomes. Broader student-level and institution-level available in the HEIMS/TCSI data collections could be used to adjust for compositional differences across the HEPPP-funded programs in terms of the participant base, and to take into account the institutional context under which these programs operate. Programs that are particularly effective at improving the primary outcomes could be identified, with a view of sharing best practice and informing the design of other HEPPP-funded programs.

Option 3: Information characterising HEPPP-funded program

This most comprehensive option for data collection assumes that in addition to the information identifying a particular program (such as program name or unique ID) some basic information about the program design and features is passed onto the Department in a standardised format. The proposed Data Reporting Tool at the program level (see Section 5.2.3) could be used for this purpose. The data format would be the same as in Option 2, with multiple rows of data provided for each student, each of them capturing a standardised set of program characteristics.

Under Option 3, all the analyses described under Options 1 and 2 could still be performed. Additionally, Option 3 would enable identifying in a systematic way the specific characteristics of HEPPP-funded programs that are associated with better outcomes for their participants. While the information about programs is likely to be limited to a small number of core features, providing such information to the Department in a standardised way would facilitate an initial assessment of the relevance of key program characteristics for improving student outcomes. This could then be supplemented by the synthesis of individual impact evaluations (see Section 6.5) to gain a more in-depth understanding of the features of programs that appear to work particularly well in terms of improving student outcomes.

6.4.3 Leveraging Data Linkages to Support Evaluation at the National Level

As previously outlined, once information about HEPPP-funded program participation is captured in the student-level data collections held by the Department (HEIMS/TCSI), this would immediately open up opportunities to quantify the impacts of HEPPP-funded programs on the outcomes at the Participation and Transition Out & Attainment stages that are already routinely captured in these data collections. Linking additional data – particularly administrative data – can considerably expand data analytic capabilities, including the ability to test the impact of HEPPP-funded programs on additional outcomes, beyond those currently captured in HEIMS/TCSI data collections, and testing interventions delivered at the Pre-Access and Access stages of the student life course.

This section first outlines some general challenges and opportunities associated with data linkages, and then moves on to present data linkage options that could be pursued in order to enhance the functionality of the SEHEEF and boost analytic capabilities of the data in order to support national-level analysis of the HEPPP program data.

The focus in this section is on data linkages to support national evaluation of HEPPP-funded programs, which would involve linking data at an individual level. While some of the data linkage strategies outlined later in the section could be also potentially pursued by individual universities for the purpose of QIEs of university-run programs as described in Chapter 5, this would likely result in additional barriers and challenges, including technical capabilities and privacy considerations. Still, some data linkages could possibly be undertaken to support QIEs of individual programs run by universities, and these should be considered by the teams undertaking these evaluations, as noted in Chapter 5. These would most likely involve 'pared back' data linkages, such as those involving linking data at the school level, rather than individual student-level data, as outlined briefly in Chapter 5. The costs and benefits of such data linkages would need to be considered by the teams performing such evaluations.

6.4.3.1 Processes and Challenges associated with Data Linkages

Multiple stakeholders in the data consultations underlined that data linkage are subject to complex, multi-stage and prolonged processes. Data linkage at an individual level can only be performed by specialised accredited agencies, under strict protocols and with adherence to legal regulations, including around privacy and confidentiality of the data being linked. The process would typically involve multiple stages, as outlined below.

1. Privacy and ethical considerations.

Any data linkage project would need to adhere to the relevant privacy legislation, such as the Commonwealth Privacy Act 1988. If state data are also to be linked, the relevant state legislation would also need to be adhered to – for example, in NSW this is the Privacy and Personal Information Protection (PPIP) Act 1988. Furthermore, there could be also agency-specific legislation that might need to be taken into account, depending on data being linked. Examples include secrecy provisions that apply to statistical collections under the Census and Statistics Act 1905 (ABS), identifiable data disclosed under the Health Insurance Act 1973 and National Health Act 1953 (Department of Health), and the disclosure of protected information relating to income support (Social Security (Administration) Act 1999) and family payments (A New Tax System (Family Assistance) (Administration) Act 1999) (Department of Social Services). Appropriate protocols need to be established outlining intended data uses and covering the risk of deidentification, and the issues around consent to use the data for linkage purposes.

When linking historic (i.e. already collected data) a typical situation is that individuals did not express explicit consent for their data to be linked to other sources, which is a requirement under the legislation. In this case, a mechanism to wave explicit consent for data linkage needs to be established. In some cases, there might be provisions in the relevant legislation to provide exemption for research purposes, which would then need to be approved by an ethics committee. However, for more complex linkages, such as those involving state and commonwealth data linkages, setting up a Code of Practice (COP) directly with the Australian Information Commissioner and Privacy Commissioner would typically be required. The project might also need to undertake a Public Interest Disclosure (PID), particularly when multiple agencies are involved at state and/or commonwealth level. Based on the previous examples of successful large-scale data linkage projects, this stage of the process alone is likely to take up to two years.

An accredited ethics committee would need to approve the linkage project, with its data governance and (see below) and intended uses clearly specified. Generally, data linkages are performed for a particular use (a defined use case), and with a clearly outlined parameters and timeframes. However, it is also possible to establish data linkage as a multi-use enduring linked data asses, allowing it to be used multiple times and for different purposes, such as recurring evaluations of HEPPP-funded projects. Such arrangements would have to be approved by an appropriate ethics committee, under clearly defined conditions of usage. As noted earlier, an enduring asset of this type would need to be set up with the Australian Information Commissioner and Privacy Commissioner, which would require a considerable amount of time.

2. Setting up data governance processes, including agreements with data custodians.

Each dataset has a designated custodian who maintains and gives permission to use or link data. Data custodians are agencies responsible for managing the use, disclosure and protection of source data used in a statistical data integration project.[13] Data custodians collect and hold information on behalf of a data provider (defined as an individual, household, business or other organisation which supplies data either for statistical or administrative purposes). Data custodians would typically comprise individual Commonwealth Government departments and agencies (e.g. DESE is the data custodian for HEIMS/TCSI data, while ATO is the data custodian for income tax data) or State Government departments of bodies (e.g. State Departments of Education are custodians for government school data).

A data governance framework would need to be negotiated with all data custodians providing data for linkage, which would likely be prolonged in case of multiple data custodians involved. The negotiations would need to ensure that all individual data custodians are comfortable with what data is being shared, with whom, on what conditions, and how it is to used, by whom and for what purpose. Furthermore, the data governance framework would need to clearly outline the public benefit which can be derived from the use of the proposed integrated datasets.

This process typically requires signing formal Memorandums of Understanding (MoUs) between the data custodians following comprehensive multi-lateral consultations. Such agreements would specify the agreed set of data to be supplied by each data custodian in an agreed format, with detailed considerations around specific data items needed for the purpose of a particular project, and justification for they are needed (data custodians are unlikely to simply provide all data they have).

Stakeholders in our data consultations pointed at sensitivities involved in this consultation process, such as certain scepticism among State agencies around sharing data with Commonwealth agencies due to perceived one-directionality of data flows and benefits from such data linkages. Furthermore, stakeholders expressed the view that many agencies (both State and Commonwealth) tend to be risk averse when it comes to the issues of data privacy, particularly when certain groups perceived as vulnerable are involved (such as very young students, e.g. in primary schools). In these cases, additional governance protocols would likely be required to cover the increased risks associated with including such groups of individuals. Again, stakeholders in consultations highlighted that this is likely to be time consuming process, particularly when multiple data custodians are involved and/or when data from vulnerable groups are involved.

3. Data linkage.

Data linkages can only be performed by specialised data integrating authority. Integrating Authorities undertaking data integration projects involving Commonwealth data for statistical and research purposes must be formally accredited. While based on the stakeholder consultations there are some legislative changes foreshadowed that might change the current model, currently there are only seven Accredited Data Integrating Authorities that are able to provide linkages that involve Commonwealth data:[14]

- Australian Bureau of Statistics (ABS)
- Australian Institute of Health and Welfare (AIHW)
- Australian Institute of Family Studies (AIFS)
- Department of Social Services (DSS)
- Queensland Government Statistician's Office (QGSO)
- Centre for Victorian Data Linkage (CVDL)
- South Australia Northern Territory DataLink (SA NT DataLink)

[13] For more details, see: https://toolkit.data.gov.au/Data_Integration_-_Roles_and_responsibilities_of_data_custodians.html
[14] For more information, see: https://toolkit.data.gov.au/Data_Integration_-_Accredited_Integrating_Authorities.html.

Additionally, there are State-based data linkage agencies, who are authorised to link state data but not Commonwealth data, such as the Centre for Health Record Linkage (CHeReL) in New South Wales.

The choice of integrating authority is typically based on a consultative process led by the data custodians taking into account any preferences of the data users. Data custodians need to give in-principle approval – as part of the negotiations described in point 2 above – for the project to proceed before an integrating authority is appointed. In the case of SEHEEF, the ABS would be a natural choice for a data integrating authority due to the fact that it is the data custodian for some of the relevant data (Census) and that it has already performed linkages of the HEIMS data to other Commonwealth data assets, including for the Multi-Agency Data Integration Project (MADIP) – see Box 10.

Box 10. Multi-Agency Data Integration Project (MADIP) data linkage.

Project title	Multi-Agency Data Integration Project (MADIP)
Data linkage type	Commonwealth to Commonwealth
Project summary	MADIP is one of the data assets maintained by the Australian Bureau of Statistics (ABS). It combines information on education, government payments, healthcare, income, employment, and demographics. MADIP was first established in 2015 and then further developed through the Data Integration Partnership for Australia (DIPA) between 2017 and 2020. The aim was to utilise administrative data collected by various Commonwealth agencies by integrating them and making them available for researchers.
Data sets included	The following datasets currently have an enduring link to MADIP: • Census of Population and Housing 2011 and 2016 (ABS) • National Health Survey (ABS) • Survey of Disability, Ageing, and Carers (ABS) • ABS Business Characteristics Survey (ABS) • Business Longitudinal Analysis Data Environment (BLADE) Core Dataset (ABS) • Personal Income Tax (Australian Taxation Office) • Single Touch Payroll (Australian Taxation Office) • JobKeeper (Australian Taxation Office) • Pharmaceutical Benefits Scheme (Department of Health) • Medicare Benefits Schedule (Department of Health) • Centralised Register of Medical Practitioners (Department of Health) • Australian Immunisation Register (Department of Health) • Medicare Consumer Directory (Services Australia) • DOMINO Centrelink Administrative data (Department of Social Services) • Australian Early Development Census (AEDC) (DESE) • Australian Apprenticeships Incentives Program (DESE) • Higher Education Information Management System Data (HEIMS) (DESE) • National Disability Insurance Scheme (NDIS) (National Disability Insurance Agency) • Death Registrations (State and Territory Registrars of Births, Deaths, and Marriages) • Migration data (Department of Home Affairs) The above list includes datasets having enduring links to MADIP. It is possible to link other datasets to MADIP. In addition to the MADIP General Release version, which is accessible to all individuals authorised to use Data Lab,

	custom version of MADIP can be created that contain additional or more granular data (See below). Access to such customised version requires additional permissions.
Data integration process	The ABS maintains the Person Linkage Spine. It is based on the combined population from Medicare Consumer Directory, DOMINO Centrelink Administrative Data, and Personal Income Tax. The ABS aim to cover with the Spine all individuals residing in Australia at any point during a reference period. Each of the individual datasets is linked to the Spine. Therefore, it is possible to link various datasets available in MADIP more efficiently. Researchers do not get access to all modules by default. Instead, they have to request access to specific modules that are required for their project. It is possible to link new data with the spine and other components of MADIP, creating a customised version of MADIP. The ABS needs at least in principle support from all the stakeholders involved (including data custodians) to initiate the process of creating such a customised data resource. The next steps include establishing a governance process, assessing risks, negotiating and signing memorandums of understanding with every data custodian, data collection, and assembly. Only then can data be made provided in Data Lab for analysis. In some cases, a pilot might be necessary before a full-scale rollout.
Timeframes for undertaking linkage	MADIP was developed over a period of around 3 years. Initially MADIP was set up as a Cabinet-in-confidence project, and only opened later to researchers in the government, and then to the broader research community.

There is a cost associated with data linkage services, which can be very substantial for complex linkages involving large data sets, like those that would be required to support the SEHEEF. For State-to-Commonwealth data linkages it might be more economical for all the State data being integrated by the relevant state integrating authorities, before passing on this data into an Accredited Integrating Authority, such as the ABS. Such process was, for example, followed on the Pathways For The Future data integration project in New South Wales (see Box 11 for details). The initial step involved linkages of state data from multiple sources undertaken by CHeReL, with the linked NSW data subsequently passed onto further integration with the MADIP data. The cost of data linkages was one of the main considerations behind the two-step data linkage process.

Box 11. Pathways for the Future data linkage.

Project title	Pathways for the Future
Data linkage type	State to Commonwealth (single state: NSW)
Project summary	This project was set up to analyse education to employment pathways for young people aged 15 to 24 years in NSW over the period 1996-2016. The goal was to identify the factors, drivers, and characteristics associated with completion of school, post-school education (vocational education and training and HE), and attainment of work. In addition to providing insights to inform prospective students about different pathways of study, the project aimed to provide evidence to inform government policies and programs that help young people transition through the education system and into meaningful employment
Data sets included	• Census of Population and Housing (Australian Bureau of Statistics) • Demographic information from Medicare Enrolment Database (Department of Health) • Personal Income Tax (Australian Taxation Office) • Social Security and Related Information (Department of Social Services) • Apprentices and Trainees & NSW Student Outcome Survey • Smart, Skilled and Hired data (NSW Department of Industry) • Vocational Education and Training data (NSW Department of Industry) • TAFE NSW • NSW Education Standards Authority • NSW public school enrolment and student characteristics • NSW public school workforce profile (teachers) (NSW Department of Education) • NAPLAN, Record of School Achievement, Higher School Certificate (NSW Education Standards Authority) • Higher Education Information Management System (HEIMS) data (Department of Education)
Data integration process	Data on Y10-Y12 students provided by the NSW Education Standards Authority (NESA) constitute the cornerstone of the dataset. NESA does not have data as detailed as the NSW Department of Education, but its data cover all three sectors: government, catholic, and independent schools. The records were linked with other NSW data. DESE provided information on HE trajectories. The CHeReL was responsible for linking the State and Commonwealth educational data. In the final step, ABS linked the data to MADIP.
Timeframes for undertaking linkage	According to stakeholders in data consultation, a project of this type is expected to take about 3-4 years minimum before data are available for analysis. The steps include: negotiations with data custodians, resolving legal issues related to privacy and data protection (e.g. by setting up a Code of Practice) - approximately 2 years, ethics approval – 6 months or more, data preparations – about 6 months, and data linkage - 6 months or more. Adding a pilot phase would likely extend the process to about 5 years.

4. Data storage

There are a set of issues around an appropriate storage of data that will need to be taken into account at the planning stage. Integrated data of the kind that would be used in the context of SEHEEF would likely require storage in a secure environment. If data linkage was done by the ABS, data could also be stored (at a cost) in the ABS secure environment, which could also be used to provide access to the data for users via the ABS Data Lab (also see point 5 below). Otherwise, dedicated secure data warehouse would have to be set up specifically for the purpose of the data integration project, with clear protocols governing storage, security and access to the data. Such a solution would also have to be explicitly considered when setting up the data governance framework (see point 2) and negotiated with data custodians. According to stakeholders in the data consultation, building a dedicated secure data storage facility would likely be expensive and time consuming.

At the point of being placed in a secure storage environment, the data would typically need to be deidentified, which helps with data governance and also reduces the cost of data storage. At this point, it is very useful for the data to be assigned a unique ID to enable further data linkages without the need for identifiable information to be stored with the data. The Unique Student Identifier (USI) (see Box 12) could perform this function in the future. Storing identifiable data would require additional governance protocols, in adherence with appropriate legislation, and would be much more costly according to stakeholders in the data consultations.

Box 12. The Unique Student Identifier (USI).

Unique Student Identifier

The Unique Student Identifier (USI) is a reference number consisting of ten numbers and letters. It is intended to identify a student through their entire educational path. The USI initiative is supported by the Student Identifiers Act 2014. It is being managed by a Commonwealth statutory office - the Student Identifiers Registrar. The Registrar is responsible for administering the USI initiative nationally.

USI was first introduced in 2015 in VET, and from 2021 has been extended to HE. However, it is not yet fully implemented in HE. Students are encouraged to obtain their USI as soon as possible, but USI is not obligatory at this moment, although it is required for new HE students to have one to be eligible for a Commonwealth-supported place and Commonwealth financial assistance. However, starting from 2023, it will be necessary to obtain a USI to graduate from a HE institution.

USI will be extended to include school students by December 2023, with every school student to have assigned USI by then. In principle, from 2024 onwards student-level information such as NAPLAN results or attendance data could be linked using USI. However, for this to be possible, appropriate processes and Data Governance Frameworks would have to be developed to enable data linkages to happen. These would need to be subject to future negotiations with data custodians, as current implementation focuses only on rolling out USI in schools, and data linkages are not in scope of this implementation.

Besides the benefits for students and administration, the implementation of USI will create technical infrastructure that could greatly simplify future data linkages. Currently, even at the state level, agencies might not use a common student ID, which complicated data integration processes. However, any such initiative will require legislative considerations, and establishing appropriate governance foundations first.

5. Data access and analysis

When setting up a data integration process, special considerations need to be given to the issues around providing access to the data for users, such as data analysts or evaluation teams. A key challenge here is providing as much data as possible (which maximises the utility of a dataset), while still maintaining the confidentiality of the information. Confidentiality is breached when a person, group or an organisation is re-identified through a data release or when information can be attributed to them. The likelihood of this happening is called the risk of disclosure, and minimising this risk is an important consideration for any data integration project. The risk of disclosure depends on the type and format in which the data is provided, as well as the analytic and reporting methods used. For instance, there are certain requirements for minimum sample sizes that are required for analysis to minimise the risk of disclosure, with requirements varying depending on the outputs of analysis, e.g. coefficients from modelling, aggregated statistics or tabulations of variables. Once again, appropriate protocols need to be set up around this, which would form part of the data governance framework.

The ABS Five Safes Framework[15] is a leading example of such a framework governing access to and usage of data. The Five Safes Framework takes a multi-dimensional approach to managing disclosure risk. Each 'safe' refers to an independent but related aspect of disclosure risk. The framework poses specific questions to help assess and describe each risk aspect (or safe) in a qualitative way. This allows data custodians to place appropriate controls, not just on the data itself, but on the manner in which data are accessed. The framework is designed to facilitate safe data release and prevent over-regulation

The five elements of the framework are:

- Safe People: Is the researcher appropriately authorised to access and use the data?
- Safe Projects: Is the data to be used for an appropriate purpose?
- Safe Settings: Does the access environment prevent unauthorised use?
- Safe Data: Has appropriate and sufficient protection been applied to the data?
- Safe Outputs: Are the statistical results non-disclosive?

Through providing access through their secure environment – the Data Lab – ABS does routine checks against the Five Safes Framework. Data Lab users need to be appropriately trained and certified in order to access projects in the secure environment, and all outputs are undergoing a rigorous clearance process before they are released from the Data Lab.

While historically there was only limited data sharing between different Government departments and agencies, recent successful data integration projects such as MADIP (see Box 10) or Pathways for the Future (see Box 11) exemplify a recent push to leverage data linkages across multiple data sources, and to open up access to them. In this context, it is worth noting the recent Data Availability and Transparency Bill 2020, currently in Parliament, which was introduced to implement a scheme to authorise and regulate access to Australian Government data. The bill proposes authorising public sector data custodians to share data with accredited users in accordance with specific authorisations, purposes, principles and agreements; specifies the specific responsibilities imposed on data scheme entities; establishes and specifies the functions and powers of the National Data Commissioner as the regulator of the scheme; establishes and specifies the functions and membership of the National Data Advisory Council as an advisory body to the commissioner in relation to sharing and use of public sector data; and establishes the regulation and enforcement framework for the scheme.[16]

Despite these promising recent developments, data integration remains a complex area with multiple issues that need to be resolved, as outlined above. Consequently, while offering considerable benefits to SEHEEF's analytic and evaluation capabilities, leveraging data linkages is likely to require a coordinated effort on the part of the Government and significant amount of time and resources. Based on examples of successful data integration projects of comparable scale, such as the Multi-Agency Data Integration Project (MADIP) data

[15] For more details, see https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/1160.0Main%20Features4Aug%202017
[16] For more details, see https://www.aph.gov.au/Parliamentary_Business/Bills_LEGislation/Bills_Search_Results/Result?bId=r6649

(see Box 10 on page 124), the NSW Pathways for the Future data (See Box 11 on page 126), or the National Integrated Health Services Information Analysis Asset (NIHSI AA Data – see Box 13), data integration for the SEHEEF in its fullest version would likely require at least five years from the beginning of the process to the point when the data can be analysed by evaluation teams. Considering this, a staggered approach to data integration might be beneficial, prioritising data linkages that are easiest to achieve, and with each stage building and expanding on the data integrated at the previous stage. Such a staggered data linkage strategy proposed for the SEHEEF is outlined in the next section.

Box 13. National Integrated Health Services Information (NIHSI) Analysis Asset (AA) data linkage.

Project title	National Integrated Health Services Information (NIHSI) Analysis Asset (AA)
Data linkage type	State to Commonwealth (multiple states)
Project summary	The AIHW worked with the Australian Government Department of Health and state and territory health authorities to create the NIHSI AA. The NIHSI AA contains de-identified data from 2010–11 onwards covering rich health and medical data pooled across a number of Commonwealth and state and territory data holdings. NIHSI AA has been set up as a multiple-use enduring integrated longitudinal dataset, which allows the data to be used for multiple research and data analytics projects, avoiding the need to create new data sets for individual analytic projects.
Data sets included	• Data on admitted patient care services (in public and private hospitals where available) • Emergency department services and outpatient services in public hospitals for all participating states and territories • Medicare Benefits Schedule data (Department of Health) • Pharmaceutical Benefits Scheme and Repatriation Pharmaceutical Benefits Scheme data (Department of Health) • Residential Aged Care data • National Deaths Index data
Data integration process	Individual data custodians supply data for linkage (special provisions needed for some data). AIHW, as an accredited data linkage agency, is responsible for the linkage. Each of the datasets is linked to a person linkage spine, which makes combining datasets for multiple projects relatively simple. AIHW is the data custodian and has control over the content and egress of the data. In addition, it maintains a secure warehouse to store the data. The Advisory Committee (AC) oversees the process and has a role in approving final outputs produced.
Timeframes for undertaking linkage	The project took about 5 years to establish. It started as a pilot in 2015. The ethics process to build NIHSI AA began in late 2017/early 2018. The approval was granted in 2018. The participating jurisdictions gained access to the data in 2019/2020. Creating the asset involved developing data governance protocols, coordinating multiple custodians, e.g. agreeing on a model for data elements and metadata standards.

6.4.3.2 Data linkage strategies for the SEHEEF

This section outlines data linkage for the SEHEEF, aimed at gradually expanding the evaluation and data analytic capabilities of the framework. Three stages are proposed, each building and expanding on the previous stage. While the earlier stages are being implemented, preparatory work should already be undertaken for the subsequent stages in order to limit any delays associated with implementing them. As described in Section 6.4.3.1, data linkages – particularly those described in Stage 3 below – are likely to take a considerable amount of time and effort. Collectively, the proposed stages are expected to take about 5 years to complete (see also Chapter 7 for the implementation timeline).

Stage 1: Adding HEPPP program participation data to HEIMS/TCSI

The first stage of the data integration process involves adding information about participants in equity programs, at the individual student level, to the routinely collected student data in the Departmental HEIMS/TCSI collections. As outlined in Section 6.4.2, there are multiple options available for collecting data on HEPPP participants, ranging from a binary flag at an individual student level indicating enrolment in any HEPPP-funded program, to data capturing some basic information about HEPPP programs provided at an individual participant level. Negotiations with universities around collecting this information should commence immediately as this is a critical step to enable system-level evaluation and analysis of HEPPP-funded programs in relation to key outcomes at the Participation and Attainment/Transition Out stages of the student life course. Provided that a process is developed around universities providing this information to the Department on a routine basis and in a standardised format, such data would be then able to be readily merged by the Department with the outcome data already available in HEIMS/TCSI, such as data on course completion.

Stage 2: Linking in additional outcomes at the Participation and Attainment and Transitions Out stages

The next step in expanding evaluation and analytic capabilities of the SEHEEF should involve linking additional outcome data pertaining to the Participation and Attainment/Transitions Out stages. This stage could be split into two steps, based on the complexity of the tasks involved.

In the first step, the suite of the Quality Indicators for Learning and Teaching (QILT) surveys should be linked to the integrated data developed at Stage 1. Specifically, data from the Student Experience Survey (SES), the Graduate Outcomes Survey (GOS) and the Graduate Outcomes Survey – Longitudinal (GOS-L) could all be linked at this step. The data linkage would be technically very straightforward as all the QILT surveys use HEIMS/TCSI as the sampling frame, so a unique link already exists between the HEIMS/TCSI data collections and the QILT surveys. Incorporating data from the QILT surveys would enable access to additional outcomes at the Participation stage, including indicators of student experience and academic performance, which could be sourced from the SES, and a range of outcomes on graduate destinations and outcomes relevant to the Attainment/Transition Out stage that could be sources from the GOS and GOS-L surveys. These include data on labour market destinations (employment status, industry, occupation), information on wages/salaries and other relevant outcomes. GOS captures information on the outcomes at 6 months after graduation, while GOS-L captures the outcomes at 3 years post-graduation.

Linking in data from the QILT surveys is most likely to be useful for evaluating outcomes at the sector level, i.e. assessing outcomes of students who participated in any HEPPP-funded program vis-à-vis similar students who did not participate in any HEPPP-funded programs. As outlined in Section 5.3.1.2, the QILT surveys are likely to have limited utility in rigorously evaluating outcomes for individual HEPPP-funded programs due to selective coverage and non-response. However, they could still be useful for descriptive and correlational analyses of outcomes at the individual program level.

The next step within stage two should involve expanding the integrated dataset by linking in the MADIP data. MADIP provides highest quality objective information on student and graduate outcomes (as opposed to subjectively reported outcomes obtained via surveys), covering a wide range of domains. Available outcomes include employment information (including whether employed, full and part-time status), occupation, information on wages/salaries and other sources of income, information on unemployment

benefits and other welfare payments, and health-related information (including mental health) through administrative information on health services accessed and medication used. This data would be available for the full populations of university students and graduates, eliminating any loss of data due to partial coverage, and eliminating non-response and other bias that are typically present in survey data. Due to these features, outcome data sourced via MADIP could be used to support rigorous QIEs of individual HEPPP programs operating at the Participation/Transition Out stages.

HEIMS data is already a part of MADIP so such a linkage would be technically straightforward. In practice, this would amount to creating a customised version of the MADIP data (also see Box 10), which would include (selected) information currently available in MADIP, an expanded HEIMS/TCSI data (with information capturing HEPPP program participation) and the data from the QILT surveys. Creating a customised MADIP version would have the advantages of being able to tailor the content and ensuring that most up-to-date HEIMS/TCSI and outcome data are available in this integrated dataset.

Another strategy that could be explored would involve including the QILT surveys and the HEPPP-participation data in the pool of datasets that are available to the general research community as part of the MADIP general release. The advantages of this option would be a likely lower cost of the data linkage and opening up the data to the research community in the spirit of transparency and creating an invaluable resource for the whole HE sector, while also ensuring that the data is routinely updated. Through pursuing this option, individual research teams could use this data to perform QIEs of specific HEPPP-funded programs (assuming that the data identifying programs would be included in the general release). However, the feasibility of going down that path would need to be explored with the ABS, including assessing the risk of potential disclosure. Going down the path of customised integrated data resource with restricted access is likely to reduce this risk, as well as providing the Department with more flexibility around tailoring the data to its evaluation and analytic needs.

Stage 3: Expansion to Pre-access and Access stages

Stage 3 of data integration strategy for the SEHEEF would involve expanding data linkages to also cover Pre-Access and Access stages of the student life course. This would involve a complex process of negotiating access to data with multiple data custodians and setting up data governance frameworks, as outlined in Section 6.4.3.1. This stage of data integration would involve several distinct steps.

First, a system would need to be set up to capture information on HEPPP program participants at an individual level. This would require a sector-wide data capture system akin to the HEAT model in the UK (see Box 8 on page 76) that would cover a broader population of participants in equity programs, including those who never end up enrolling in university. The feasibility of capturing such information from participants in equity projects should be also considered, including selective approaches such as those focusing on high-intensity programs only.

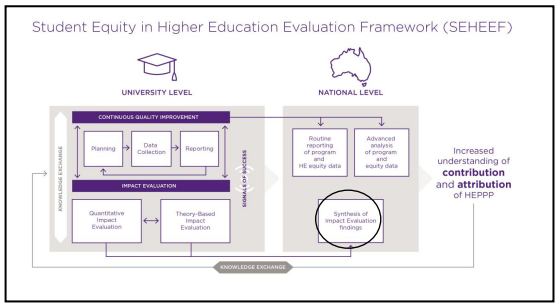
Once the information on HEPPP-program participation in the Pre-Access and Access stages is captured at an individual level, this information needs to be linked to outcome data held in existing administrative data sources. These linkages would also enable identifying appropriate control groups (i.e. individuals who did not participate in HEPPP-funded activities), and capture the outcome data for both HEPPP-program participants and the control groups. However, a major complication at the Pre-Access and Access stages is that the relevant data is held by multiple stakeholders across and within states, including across different school sectors (see Section 5.3.1.4). The consequence of that is that a comprehensive data integration project would require negotiations and agreements not only with State Departments of Education across multiple sectors and territories, but also possibly with Catholic and Independent peak bodies. While, as outlined in Section 6.4.3.2, the statutory assessment bodies in some of the states (such as QCAA in Queensland and NESA in NSW) and Tertiary Admission Centres hold individual level data from across the sectors, the extent to which they can share this data and make it available for further linkages would need to be explored. In addition to data on school students, data on participants in VET courses would need to be added to accommodate individuals taking alternative pathways to HE. As outlined in Chapter 5, the Total VET Activity data comprises the relevant information. NCVER is the custodian for this data and they would need to be included in the multi-lateral negotiations.

Stakeholders in our consultations highlighted the potential benefit of an intermediary body that would collate data from across different states and territories and standardise it for integration with the Commonwealth data. AIHW has successfully played such a role in the health sector, including its role in creating the NIHSI AA dataset (see Box 13), which could be used as a best practice example, on which solutions in the education sector could be modelled. In principle, ACARA would be well positioned to play such a role in the future, due to the fact that they already collate individual-level NAPLAN, and school-level data from across the States and Territories but their remit would need to be expanded to cover data integration functions. Alternatively, a dedicated data integration and standardisation body could be established. In either case, a major benefit of having such a body integrated state-based data would be the ability to standardise and prepare data for consistent integration with Commonwealth data, reducing the risk of misalignment in data provided by individual States and Territories, and peak sector bodies.

An additional complication at the Pre-Access and Access stages is the lack of common student identifier. According to stakeholders in data consultations, it is often the case that multiple identifiers are used by different bodies and agencies within the same state. For instance, in both Queensland and New South Wales, the State Departments of Education use their own unique identifiers, while the statutory assessment bodies (QCAA and NESA respectively) have their own identifiers, with some misalignment likely to occur between the two sets. The roll out of the USI into schools from the end of 2023 (see Box 12 on page 127) offers a significant opportunity to facilitate data linkages at the Pre-Access and Access stages. However, according to the stakeholders in data consultations, data linkages using USI have not been part of explicit conversations with the data custodians at this stage, so this is something that would need to be addressed in the multi-lateral consultations around setting up data governance frameworks.

All in all, according to the stakeholders in the data consultations, expanding the data integration to the Pre-Access and Access stages would be complex and time intensive. It would require intensive planning and coordination, including getting on board the relevant stakeholders and data custodians, and standardising the process and data specifications to avoid unnecessary repetitions of this complex process. Stakeholders in the data consultations also expressed the view that such exercise would need to have explicit support from and be championed at the highest levels of the Government.

6.5 Synthesis of University Level Quantitative and Theory-Based Evaluation Findings



Evaluating the HEPPP at the national level may involve examining and synthesising the evidence from the CQI activities and the Impact Evaluations (QIE and TBIE) gathered from the university sector activities. As outlined in Section 6.4, once data on the HEPPP program participation at the individual level have been integrated with other data systems capturing student outcomes, it will be possible to undertake advanced statistical analyses of this data, including QIEs of individual HEPPP-funded programs. TBIEs at the program level will provide deeper insights into how and why observed outcomes were produced, accounting for contextual factors. Synthesising these findings across a broad range of programs presents the potential for unique, actionable insights at the national, sector-wide level. There are several synthesis methods that can be used depending on the data source, similarity of the outcomes, and complexity of the interventions (see Table 27 for a summary).

6.5.1 Quantitative Synthesis

Quantitative synthesis involves systematic approaches to aggregating numerical evidence (e.g., effect size) from individual evaluation studies in an attempt to provide a clearer picture of program effects. This synthesis approach includes meta-analysis and narrative summary and will be most appropriate for the individual

QIEs. While these approaches, summarised briefly below, require different levels of methodological skill and experience, they are resource intensive and sufficient time needs to be budgeted for and allocated to undertake these analyses (Petticrew et al., 2013).

Meta-analysis

A meta-analysis approach uses statistical techniques to assess the magnitude and variation of effects across the interventions and determine whether the effects are consistent. However, meta-analyses are reliant on evaluations at the university level that measure the same outcome or construct in a similar way. In addition, diversity in the design of HEPPP-funded programs may present challenges in attributing any observed effect at an aggregate level to a particular program 'type'. If such heterogeneity in outcomes and programs cannot be overcome, then the evaluators at the national level need to synthesise the evidence using other methods, such as a narrative summary.

Narrative summary

A narrative summary involves the systematic organisation and presentation of data from multiple evaluations. Structured tabulations and graphical summaries of study findings, alongside key characteristics of the programs (e.g. setting, participants), without advanced statistical analyses, can enable common themes to be identified and interpreted, as well as sources of variability among program evaluations to be explored (Petticrew et al., 2013).

6.5.2 Qualitative Synthesis

Qualitative synthesis involves summarising qualitative findings using thematic analysis to address specific questions (Petticrew et al., 2013) and will be most relevant to individual TBIEs. Synthesising qualitative evidence involves more than simply combining qualitative findings from different evaluations. It involves systematically integrating the data to produce new insights. In Framework synthesis, a coding framework is designed before synthesising findings; this is based on theory, the review/synthesis questions, and preliminary reading of the individual evaluations. This helps to produce a map that summarises key themes or patterns may emerge for groups of programs that included certain characteristics in their design.

Another qualitative synthesis approach is thematic synthesis. This inductive approach would involve inductively grouping themes into descriptive categories through line-by-line coding of the individual program evaluations. This enables the generation of analytical themes, *whereby the reviewers 'go beyond' the primary studies and generate new interpretive constructs, explanations or hypotheses* (Thomas & Harden, 2008).

6.5.3 Mixed-method Synthesis

Mixed-method synthesis integrates quantitative, qualitative and/or mixed methods evidence from primary evaluation studies. Realist synthesis or 'realist review' aims to determine what works for whom, in what circumstances, how and why (Pawson et al., 2005), by identifying supporting or conflicting evidence for program theories. Narrative synthesis in an approach to synthesising findings across from multiple studies that mainly uses words (not numbers) to summarise and interpret the findings (Popay et al., 2006). As highlighted by Popay et al (2006, p5), *"whilst narrative synthesis can involve the manipulation of statistical data, the defining characteristic is that it adopts a textual approach to the process of synthesis to 'tell the story' of the findings from the included studies".*

Table 27. A Summary of Different Synthesis Approaches.

Synthesis approach	Purpose	Examples
Quantitative meta-analytical approaches	• To statistically synthesise quantitative data (e.g. effect size) • To summarise findings in narrative, tabular, or graphical form	Meta-analysis Narrative summary
Qualitative synthesis	• To configure/ summarise / integrate qualitative data to address specific questions	Framework synthesis Thematic synthesis
Mixed-method synthesis	• To integrate synthesis of quantitative, mixed-method and qualitative evidence within a single review	Realist review Narrative synthesis

Clearly, synthesising evidence from individual QIEs and/or TBIEs is an involved process. Across all approaches, a number of key elements from individual Impact Evaluations need to be collated: details about the intervention (e.g., activities or outputs, length and intensity of the intervention); the setting such as university type (e.g., research intensive university, university size) or location (urban or remote); the target group (e.g., equity group); and the context (e.g., economic factors, political environments, university policies). In addition to collating information on these key elements, the national evaluation needs to take into account the quality of the university level evidence and the confidence the evaluators have in the university-level evaluations.

6.6 Knowledge Exchange

One important component of the SEHEEF (see the SEHEEF Overview, Figure 10) is knowledge exchange. The need for a greater level of sharing of knowledge and expertise in the HE equity evaluation area, and for ideas, theories and approaches to be contested and refined has been previously acknowledged in the literature (Downing, 2017). The importance of knowledge exchange as a part of the SEHEEF has been highlighted by stakeholders in the consultations on the preliminary Evaluation Framework (see Chapter 7). The benefits of building robust knowledge exchange mechanisms have also been well recognised (Queensland Treasury, 2020). In the context of the SEHEEF, sharing the evaluation results in the public domain, sharing reflections on the opportunities and challenges associated with evaluation and sharing evaluation resources has the potential to:

- assist in building a robust evidence base available to university practitioners and to the Government on best practice in the HE equity space;
- enhance accountability and transparency of university-run program operations;
- build evaluation expertise and confidence in the sector;
- enable outcome comparisons and knowledge sharing across similar programs;
- encourage discussion about future opportunities for program development and evaluation, and
- contribute to synthesising evaluation findings across the sector.

The Framework aims to encourage transparency and to promote learning within the HE sector. Specifically, the SEHEEF proposes that the routine reporting of findings from CQI and Impact Evaluations, as well as the experience of delivering/managing them, are shared across the sector through knowledge exchange opportunities. This could include building (virtual) communities of practice, where stakeholders from across

the HE sector meet on a regular basis to interact and share their learnings from evaluations activities under SEHEEF and where members organise and receive relevant training or pool their evaluation resources. The existing peak bodies, such as the EPHEA could be used as a vehicle to facilitate this. Other opportunities could be built around annual seminars, conferences or equity practitioners' forums dedicated to discussing evaluation methodologies, and the opportunities and challenges associated with undertaking evaluations of HE equity programs. These activities would facilitate sharing instances of good practice and universities' evaluative approaches with a view to informing future practice and building capacity across the sector.

Transparent dissemination and sharing of evaluation findings and practitioner experiences, and evaluation training will not only enhance evaluation confidence and capability across the sector, but it will also help to highlight the successes and challenges associated with university-level evaluations to the Australian Government. The knowledge transfers between university and national level will help to address the question of how well HEPPP-funded universities are implementing the SEHEEF (see Table 26). On the other hand, the knowledge transfer between the national level and universities will enable the Government to feed back to the sector the learnings from national-level evaluations of equity projects, in order to improve planning and inform future evaluations at the university level.

The success of the knowledge exchange component will depend on how it will be implemented, and how it will be supported by the Government. Under SEHEEF, it is proposed that DESE assumes overall leadership to establish regular knowledge exchange opportunities between universities, and to set up processes to facilitate the bi-directional knowledge transfers between the Government and universities. The implementation stage should consider appropriate governance arrangements, e.g. those between universities for knowledge sharing and exchange, or between the Government and universities to coordinate the implementation of data collections and data standards.

7. Socialising the Preliminary SEHEEF

- A preliminary SEHEEF was socialised with the Higher Education sector prior to the finalisation of the design.
- Feedback from the Higher Education sector on the preliminary SEHEEF indicated a high level of acceptance:
    - Between 75%-96% of respondents provided agreement to statements that suggested a positive quality of elements of the framework, and
    - The open-ended feedback commonly aligned with the quantitative ratings and endorsed the framework or elements of it.
- Much of the critical feedback raised issues around implementation, particularly resourcing.
- The feedback from stakeholders was considered and adopted for the final SEHEEF design, including:
    - a clearer link between Continuous Quality Improvement and Impact Evaluation;
    - a recognition that successful Impact Evaluation must involve practitioners;
    - the challenges posed by the time lag in the availability of sector level data;
    - multiple refinements to the wording in the Program Logic;
    - amendments to the planning and reporting tools, and
    - an emphasis on the importance of supporting outcomes and how these are distinct from primary outcomes.

7.1 Chapter Introduction and Outline

The preliminary[17] SEHEEF was socialised with the HE sector in September/October 2021. The purpose of socialising the preliminary Evaluation Framework was threefold:

- to capture the level of acceptance of the preliminary SEHEEF in the HE sector;
- to inform revisions of the preliminary Evaluation Framework as part of this project, and
- to inform potential future activities surrounding the development and implementation of the SEHEEF.

Stakeholders from the HE sector were invited to visit a webinar recording and a PowerPoint presentation about the preliminary SEHEEF, and were asked to complete an online survey. Stakeholders could also attend a drop-in session facilitated online via Zoom to seek clarification on the preliminary SEHEEF. More detail on the process of the consultation is included in Section 2.6.3. This chapter reports on the findings from the online survey. The survey was structured and asked for feedback in relation to:

- the foundations of the SEHEEF (reflecting the content of Chapter 3);

[17] The preliminary Evaluation Framework was a draft version of the final design and is presented in Appendix C.

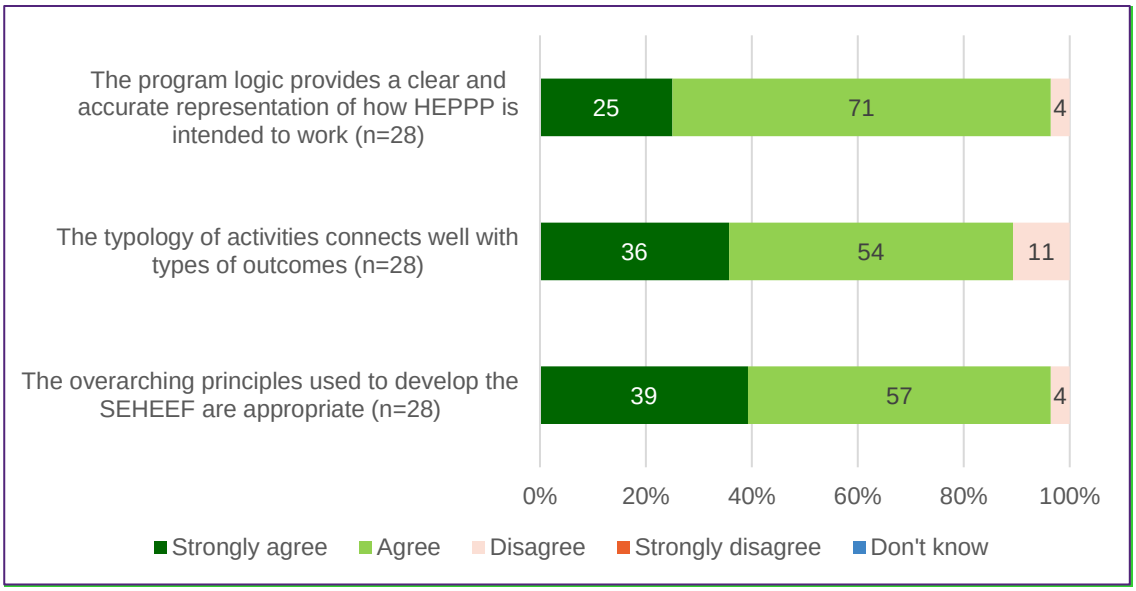
- the key components of the SEHEFF (reflecting the content of Chapter 4);
- the university level components of the Evaluation Framework (reflecting the content of Chapter 5);
- the national level components of the Evaluation Framework (reflecting the content of Chapter 6), and
- any other feedback that survey participants were prepared to give.

The structure of presenting the stakeholder feedback in this chapter reflects the survey structure. Altogether, 28 individual and organisational stakeholders participated in the survey, the majority of whom identified as working in the areas of HEPPP practice or university administration (n=19). More detail on the stakeholder response is included in Section 2.6.3.

7.2 Stakeholder Feedback: Foundations of the SEHEEF

Survey respondents were asked to indicate their level of agreement with three statements in relation to the foundations of the SEHEEF. The responding stakeholders overwhelmingly agreed or strongly agreed that the Program Logic provided a clear and accurate representation of how HEPPP is intended to work (96%), that the types of activities connect well with types of outcomes (89%) and that the principles used to develop the SEHEEF were appropriate (96%) (see Figure 12). One respondent disagreed with the first and last statement respectively (accounting for 4% of respondents), and three respondents disagreed with the statement that the typology of activities connected well with outcomes (accounting for 11% of respondents).

Figure 12: Foundations of SEHEEF, Stakeholder Agreement Scores



Respondents were then prompted for open-ended feedback about the foundations of the framework, which was provided by 19 of the 28 respondents. Part of the open-ended responses reflected the positive patterns of agreement ratings: 11 stakeholders made statements that commented on the foundations of the SEHEEF or elements thereof, such as the Typology of Activities, overarching principles or Program Logic, for example:

> *"The foundation elements are well developed, clear and present information in quite simple formats."*
>
> *"The program logic provides a thorough outline of HEPPP activities and outcomes and is an improvement on the program logic presented during earlier stages of consultation. <…> anticipates that the evaluation as structured through the principles, typology and program logic will contribute improvements to the HEPPP and outcomes for students with equity considerations."*
>
> *"At a high level, the program principles are well designed."*

"Great to see the inclusion of institutional development in the list of activities."

Some of those 11 stakeholders expressed a broader endorsement of the SEHEEF framework at this early point of the survey, for example:

"I think the design is very sound, and is set up well to deal with many different aspects of the program (key outcomes and supporting outcomes; national and institutional; different stages of the student life cycle; programs and activities). Recognition of the need for different evaluative techniques (quant and qual) for different elements and phases is also spot on - and it's excellent that not only the different, complementary roles of each, but also their limitations, are outlined). Inclusion of templates and key issues for planning is excellent too."

"You have done really well in capturing the different activities and components of HEPPP programs in the student's journey and have presented it clearly. I also like the inclusion of the systemic changes and adding prompt questions to stimulate further reflections when reporting. I think this framework may not only assist HEPPP programs with external reporting but may also support internal communication about evaluative practices and outcomes to program facilitators to encourage a positive culture of outcomes measurement that isn't too onerous and is practical for all people regardless of their experience and knowledge in evaluation and reporting."

The feedback also included some suggestions, such as to consider the building of social relationships/sense of belonging as a (preliminary) outcome in the program logic, for example:

"What is missing in the typology of activities is relationships. We know that forming strong relationships and developing a sense of belonging is very important, esp. for Indigenous students. This is not reflected in the Why?"

The ambiguity of the definition of the Attainment and Transitioning Out stage that is created by conflating the when (at the end of studies) with the what (career/employability measures) was another point of interest:

"A minor point, but the classification of Careers and Employability as an Attainment and Transition Out stage is something we are working actively to shift into a Participation activity. These types of skills are not able to be learned at the end of a course, and need to be introduced, phased and scaffolded throughout the full student lifecycle to allow reflection and growth as well as experience (WIL, work). "

One stakeholder remarked on a potential conflict between the principles of credibility and inclusiveness and culturally appropriateness on the one hand, and the application of quasi-experimental methods (possibly seen as being determined by external evaluation providers) on the other:

"…It is unclear how these principles consistently inform the rest of the document. For example, how does the implementation of quasi-experimental work respond to the idea of culture and specifically Indigenous cultures. I am concerned that you have included credibility as a principle but then describe how HEPPP practitioners will not be involved in certain aspects of the evaluation practice (e.g. … on constructing counterfactuals).."

Some respondents also made references to the context of HEPPP activities and HEPPP evaluations, and a perceived lack of addressing contextual parameters in the preliminary SEHEEF:

"Noting that the brief is to have an evaluation framework for HEPPP, and that there is a mature understanding of how HEPPP resides within a complex system/systems, there remains in my view a need to bring a sense of proportionality to the program logic of HEPPP. The funding for HEPPP is minuscule when compared to other funding sources across school, VET and HE, and non-financial resources that various system level influences exert."

As HEPPP is only one source of programs that students experience over the student life course…

"It's more a question of how one then works through the details of what HEPPP does (and does not do) to quantify the impact various funded activities."

The above quotes point to matters that would need attention when implementing certain aspects of the SEHEEF, particularly QIE. One stakeholder remarked on another aspect of implementation, which concerned the resourcing and variation in resourcing and relevant capabilities between universities:

> *"It seems very complicated and not sure it achieves its intentions of simplifying and reducing the burden for institutions. It doesn't take into account diversity of institutions and differing contexts including resources, capability and capacity of different institutions to implement."*

This was similarly expressed by another stakeholder:

> *"At a high level, the program principles are well designed. From a practitioner perspective, it is important that evaluation is designed in sustainable and integrated ways. Given the tight fiscal environment and time constraints often placed on equity practitioners it is important that program evaluation requires and employs resources (e.g., finance, personnel, time) in a manner that ensures evaluation activities can be sustained over time, if desired. In addition to this, evaluation activities should, wherever possible, leverage existing program activities, contexts and demands to ensure that evaluations are compatible with (rather than interfere with) the program."*

Yet another stakeholder picked up on that theme as part of suggesting additional principles to be considered for underpinning the SEHEEF one of which could be *sustainability*:

> *"I appreciate overarching principles should be limited to a core set, but some additional principles might also be important. These include: well-aligned (evaluation of outcomes well-aligned to program aims); coordinated (articulating well between individual program evaluation, whole of student journey, whole of institution, multi-institution); sustainable (intended as part of implementable, perhaps, but may still be worth stating explicitly); integrated (evaluation activities do not take away from the core business of program delivery to support positive student outcomes, but rather are ideally integrated into program activities and are formatively useful to the program); carefully managed (there needs to be a responsible oversight of evaluation to ensure appropriate planning, communication, coordination, execution and collation of evaluation activities)."*

The themes of sustainable evaluation activities and their integration with student service delivery raised here were more frequently expressed in the survey feedback in later open-ended fields as will become apparent further below.

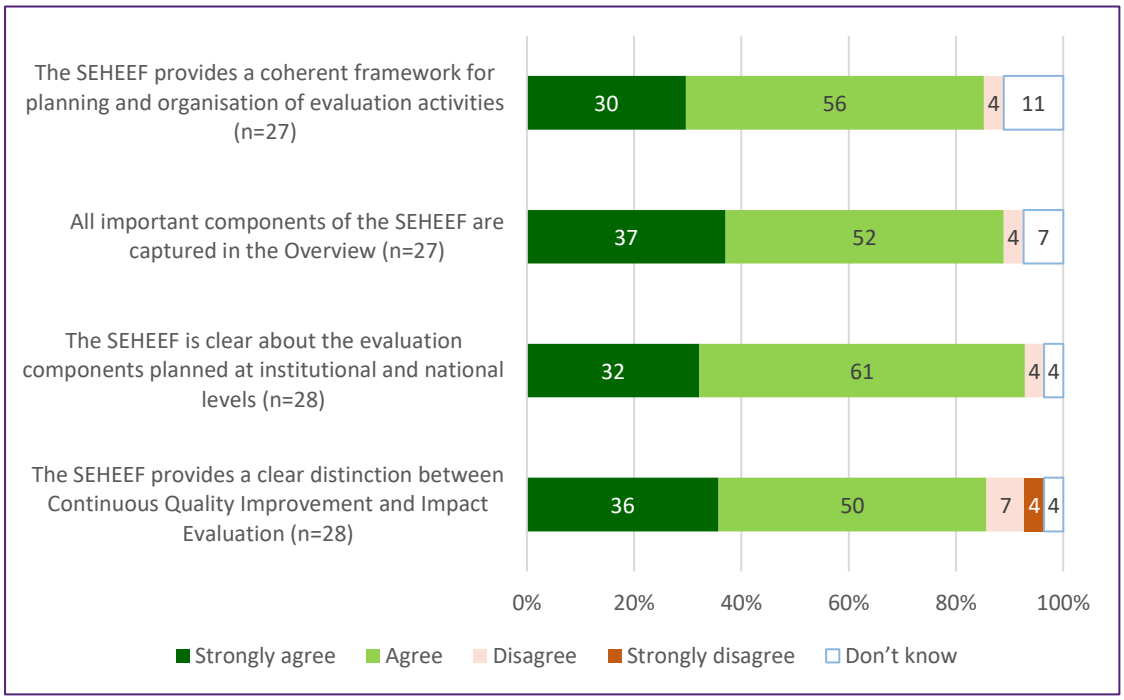
There were other individual suggestions given at this point of the survey that did not concern the foundations of the SEHEEF. Among those were requests for more detail on TBIE and suggestions to systematically include groups of Government interest (e.g. student carers, humanitarian migrants, veterans) in institutional data collections and creating HEPPP program identifiers that capture inter or multi institutional HEPPP activities.

7.3 Stakeholder Feedback: Key Components of the SEHEEF

Respondents were then asked to indicate their level of agreement to four statements in relation to the key components of the Preliminary SEHEEF as they are depicted in the Overview Visual in Figure 18 (in the Appendix on page 164).

The statements posited that the key components were coherent, important or clear, and the majority (between 85% and 93%) of the 27 or 28 responding stakeholders expressed agreement (Figure 13).

Figure 13: Key Components of SEHEEF Overall, Stakeholder Agreement Scores



Stakeholders were then prompted to comment in writing on aspects of the key components of the SEHEEF, which 18 of them did.

Some of the feedback commended the key elements or some aspect thereof, for example:

> *"I think the proposed design strikes a pretty good balance."*
>
> *"This was depicted very clearly and well."*
>
> *"<…> views the combined effect of university and national level evaluations to be a key strength of the proposed approach."*
>
> *"I like the interconnection between University and National level."*

Some stakeholders commented on the relationship between the components of the framework. This concerned suggesting clarifications about, or strengthening, the relationship between CIQ and QIE:

> *"While the impact evaluation tier of inquiry should be autonomous from the continuous quality improvement which will be undertaken by practitioners, there should still be sufficient cross-over in awareness between the two tiers to ensure impact evaluators are not simply theoretical and making detachedly abstract translations of the outcomes of HEPPP initiatives. "*
>
> *"The distinction between CQI and Impact Evaluation suggests that Impact Evaluation will have no bearing on CQI. This can be remedied by demonstrating visually that planning is informed by a variety of inputs - which might include impact evaluation."*
>
> *"I think there needs to be better clarification about the link between the Impact Analysis and the Continuous Improvement evaluation, and what triggers the Impact Evaluation, and how HEPPP funds may be used to resource these types of detailed evaluation."*

Similar sentiments about linkages were expressed in relation to other components:

> *"Only comment: was expecting a link between "Advanced analysis of program and equity data" and "Synthesis of Impact Evaluation findings". One reason for this is that "Theory-Based Impact*

Evaluation" can often identify elements and aspects of, and perspectives about, CQI which may not be captured elsewhere."

"Planning, measurement and reporting are all key aspects of impact evaluation, the visual seems to say that only measurement flows into impact evaluation. This is misleading as impact evaluation should be a key component of the planning phase."

A few stakeholders were keen on further details, which concerned both, methodological and logistical detail, for example:

"Not necessary here but would like some more detail on how the national level evaluation is to be undertaken and who will manage that."

"The measurement of impact using a quasi-experimental design with a genuine counterfactual is commendable. <…> is interested in hearing which of the proposed design scenarios is selected, and how interventions/control groups will be established across the range of student pathways and SEHEEF activities outlined in the program logic."

"As identified in the webinar, it will be important to consider how the longitudinal studies around Widening Participation will fit into / complement this framework."

"It would be useful to know who will undertake the national level evaluation. Also, whether all universities will be expected to evaluate the same cluster of activities in any given year or whether universities can choose what to evaluate. Further, what kind of support will be made available by the Department for impact evaluation at the institutional level?"

Some concerns were also expressed at this point in the survey. One stakeholder perceived an imbalance between QIE and TBIE:

"I am concerned about the way in which the Quant Impact Evaluation is always in the foreground and the Theory-based Impact evaluation is seen as complementing or in addition to. Equity work needs to foreground people and their perspectives, experiences and theories about living good lives on their own terms. The numbers should instead be used to provide an aspect of the context."

Another saw that collaboration and knowledge sharing in undertaking evaluations may be compromised by making use of external evaluation experts in impact evaluation processes:

"Fully integrated evaluation that is collaborative and shares knowledge will lead to quality continuous improvement of programs. I am unsure about how the TBIE will be included if it is conducted by external experts."

Other concerns related to resourcing or the achieving of collaborative modes of working between institutions in a competitive market:

"CQI component I think works well. Concerned how much work the impact evaluation component will involve given programs and activities are undertaken by various areas across the institution and requires collaboration and expert assistance to evaluate."

"This seems sound theoretically and in a diagram - the devil is in the details of how to implement. What is the cost of this level of evaluation and reporting."

"At the National level, like the concept of sharing information and ways of working with other institutions however conflict of interest and sharing information with those institutions in a competitive market needs to be managed appropriately."

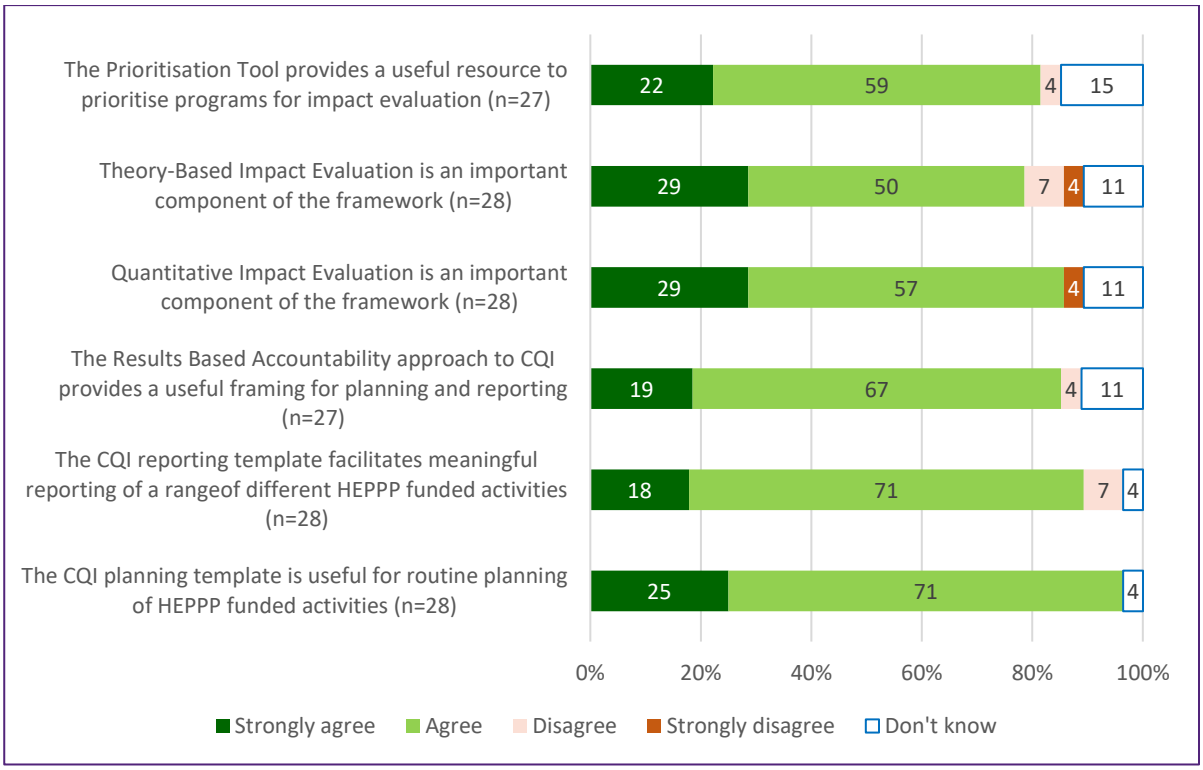
The dependence of the successful implementation of the SEHEEF on relevant levels of institutional motivation, capabilities and capacity was remarked by one stakeholder:

"As described in the SEHEEF Overview, the national level evaluation is contingent on effectively conducted university level evaluation. Given this, it will be important that CQI reporting has uptake in universities, and that respondents have the capability and capacity to complete the CQI document."

7.4 Stakeholder Feedback: University-level Components of the SEHEEF

Stakeholders were then presented with six positively worded statements about the university-level elements of the SEHEEF. The statements suggested that these elements (QIE, TBIE, Results Based Accountability approach, CQI planning and reporting tools) are either important, meaningful or useful[18]. The six statements attracted between 79% and 96% of agreement (combining the 'agreed' and 'strongly agreed' responses) as shown in Figure 14. The statement that the TBIE is an important component of the framework attracted the least agreement (79%) and the statement that the CQI planning tool was useful for routine planning of HEPPP activities the most (96%).

Figure 14: University Level SEHEEF Components, Stakeholder Agreement Scores



Again, respondents were then prompted to leave written feedback about the university level components of the SEHEEF, which 18 of the participating stakeholders did.

As before, some stakeholders commended some aspect of, or endorsed, the elements of the university level evaluation, for example:

> *"<…> supports the elements proposed for university level evaluations."*
>
> *"These templates are well developed and clear on requirements. I found distinction between CQI and Impact evaluations to be very useful."*
>
> *"The prototype templates look fine. It is my understanding that the CQI Planning template will replace the Access and Participation Plan and the CQI Reporting template and Program Data Reporting template will replace the current HEPPP Participation (Progress) Report. I don't see any major issues using these templates at the institutional level."*

[18] At the time of the survey, the planning and reporting tools were referred to as 'templates'.

Some stakeholders requested further detail or made suggestions about the tools, for example:

> *"Elements of the SEHEEF Program Data Reporting Template will need further clarification, such as: Total duration of the activity - is this hours? Hours per student? Weeks etc? Examples under each of the headings would be useful. Typically, in our HEPPP Reporting, we would articulate the $$ spent against each activity. Would that make sense to include this, in this reporting template?"*

> *"The CQI template looks quite intimidating. Could it be broken into different sections?"*

> *"The templates may not be the best format as there are limits to the information that can be included per cell which may not be enough to adequately ensure programs are represented."*

More reflection and detail was also requested surrounding the application of the tool for selecting activities/programs for impact evaluation:

> *"I think there needs to be some more work around the explanatory notes for the Prioritisation of the need for an Impact Analysis - it is currently unclear about clearly defined guidelines for what triggers this type of evaluation, and how it will be resourced, and ensuring this trigger is consistent across institutions"*

> *"<…> is interested in the role of the Prioritisation Tool in generating programs for impact evaluation. There may be potential for underperforming programs to be concealed by underemphasising program profile and maturity."*

Two stakeholders noted shortcomings in capturing, or more fundamentally considering, institutional development type of activities and associated outcomes:

> *"I'm not sure the template is useful enough to capture 'institutional development' activities. It seems to relate more to programs that have direct impact on targeted students."*

> *"There is little primary outcome focus on institutional practices. If we are serious about escaping deficit constructions and grappling with structural inequality we have to pursue more robust approaches than what is presented here and to pursue indicators and outcomes dealing with these structural considerations."*

One of the more prevalent themes that emerged at this point of the survey, and which had already emerged earlier, related to concerns about the resourcing and logistics:

> *"One will need to be careful with this framework about the costs associated with data collection and administration."*

> *"Collectively, the volume of information to be collated into the XL templates will be too large to be manageable."*

> *"The development, implementation and regular monitoring/evaluation could be very costly and resource-intensive, which may significantly reduce the availability of funds to deliver outcomes for students and divert resources to administration rather than students. Business readiness lead times and tasks may differ between institutions."*

> *"As mentioned previously, what detailed evaluation information is required and who will collate this information is a concern, given limited resources at my institution."*

> *"There are significant issues on how to make this doable across different universities with varying levels of capacity and resourcing. More time can be spent on evaluation, measuring activity rather than focusing on the delivery and impact."*

> *"Planning template has some ambiguous prompts: what constitutes involvement for identifying stakeholders? Will program administrators have a clear idea of outcomes (often these are too many, ill-defined for evaluation purposes) - how will they be supported to identify outcomes relevant to aims? Assumes a fairly high level of proficiency with evaluation research methods. This has not been our experience... I'm unclear on how this will be supported."*

The latter concern was similarly expressed by another stakeholder:

> *"The CQI planning template is useful but practitioners would benefit from a greater degree of guidance around program design and management as part of this process. We view the planning template as being most effective when practitioner teams have access to resources and skills to assist with overall program design."*

Implementation concerns were not only expressed in relation to resourcing, but also

- in relation to privacy:

  "There are very real identification issues that have not been considered here. i.e. students who will not want to be identified/recorded based on experiences of gender-based violence or care orders."

- in relation to the practical scope for HEPPP project impact evaluations:

  "The content and tone of the "prioritisation of programs for impact evaluation" section assumes that institutions have a range of programs to choose from. However, as Impact Evaluation can only be applied to current uni students at present, and the majority of our funding is used for outreach activities, the options for Impact Evaluation with current students are very limited."

- in relation to a perceived ethical (service provider) vs methodological conflict:

  "There are ethical considerations regarding who get to be in the control group. Our approach is to offer activities and services to whole cohorts. Surely, everyone who can potentially benefit should have the opportunity to participate?"

- in relation to methodological effectiveness:

  "It will be very difficult to match participants with a meaningful control group. Individual students may not participate in the HEPPP-funded activities chosen for Impact Evaluation but may be participating in other activities which also support student retention and success. We won't know this as their participation in the latter will not necessarily be recorded (and if it is it won't necessarily be linked to HEPPP reporting systems)."

  "There are so many variables at play that it may be difficult to establish causation or that the activity contributed to positive change. This brings the benefits of Impact Evaluation into question. Also, what are the consequences if causation/positive contribution is not established? Will it be concluded that the program or HEPPP as a whole is ineffective?"

  "<…> aims to engage with students at every low SES schools in the State. Therefore, it is not possible to compare outcomes with schools that do not participate in HEPPP activities."

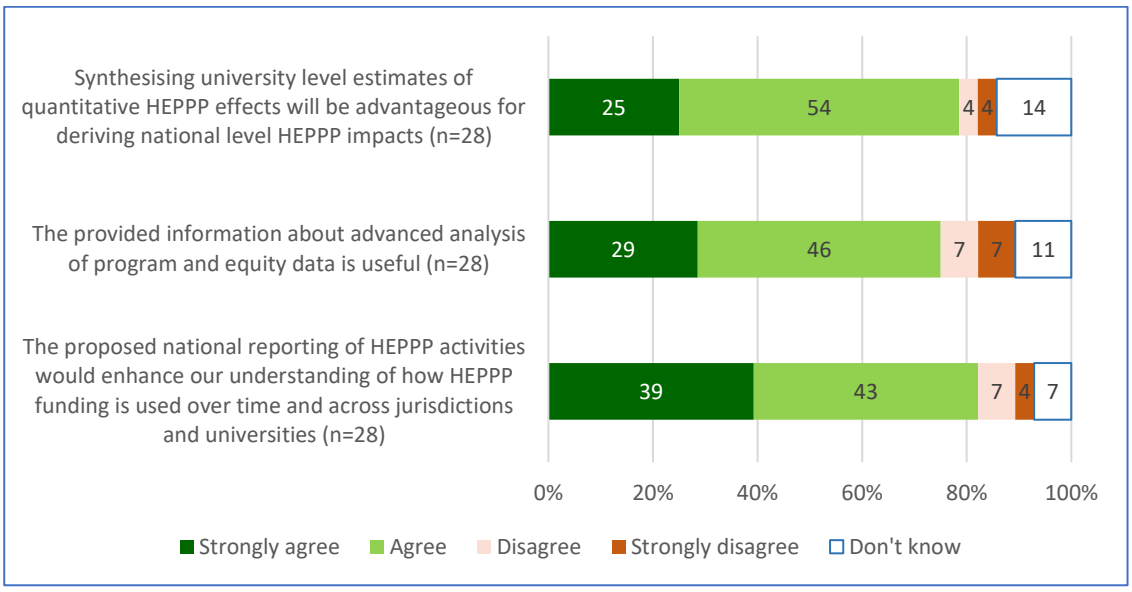
  "Theory Based Impact Evaluation… We are unclear how this type of evaluation would work in practice and have doubts about the rigor of the findings."

While there were a number of thematic concerns that were presented as segments of quotes in this section, the number of stakeholders expressing these was smaller than may be indicated by the list of quote segments. For example, all but one of the seven quotes listed under the non-resourcing implementation theme were expressed by one stakeholder.

7.5 Stakeholder Feedback: National level Components of the SEHEEF

After the university level evaluation components, stakeholders were asked about the national level components of the SEHEEF. To this end, three positively worded statements were presented, which stated that elements of the national level SEHEEF were useful or advantageous or would enhance understanding of HEPPP-funded activities. Between 75% and 82% of the 28 responding stakeholders agreed or strongly agreed with the statements (Figure 15).

Figure 15: National Level SEHEEF Components, Stakeholder Agreement Scores



As before, respondents were then prompted to leave written feedback about the national level components of the SEHEEF, which 17 of the participating stakeholders did.

Nine of those commended the national level components quite generally or commended some aspect of the national level SEHEEF components, for example:

> *"<…> commends the proposed utilisation of HEIMS data for dashboards, and the proposed HEPPP flag, WPLS and data linkages."*
>
> *"I think all of the suggested improvements for CQI evaluation at institutional and national levels are terrific. This in itself would significantly advance our understanding of what works with regard to HEPPP funded activity and increase transparency across the sector."*
>
> *"The capacity for integration of the SEHEEF into national level evaluation, policymaking and program design is one of its strengths and we endorse this approach."*
>
> *"National level reporting and analysis is critical and well planned"*

At times positive feedback was qualified by requests for further detail or concerns about implementation:

> *"I liked the emphasis on the need to get more information and data on university programs. This is indeed important in order to know what's going on, though it is likely to prove to be more work than is perhaps anticipated. Proposed changes to HEIMS/TCSI data - and links to QILT data - to identify HEPPP participants are a good idea in principle but again may prove to be difficult to implement."*
>
> *"Yes to the above, but I fear differences in the quality of evaluation and reporting (exacerbated by differences in knowledge and skill in evaluation) across programs and institutions. Also, how will a common core of outcomes be ensured, while still allowing local determination for bespoke program outcomes? Will data analysis support also be provided to turn program evaluation data into whole-of-journey and whole-of-institution aggregation, providing insights into things like cumulative benefits of multiple touch points, etc., that institutions might not be well positioned to aggregate themselves?"*
>
> *"I think the national level evaluation is very important and useful and knowledge exchange is essential, however I feel I need more information on how this will occur and how it will be funded. I support synthesising data but am unsure if student flags will give enough contextual information to draw meaningful conclusions. Eg if all equity scholarship holders were flagged, how would you know if the value, method of distribution or other supports were responsible for differing impacts."*

Further detail was also seen as needed for the advanced analysis component in respect to the content provided as part of the webinar:

> *"Not enough information has been provided on Advanced Analysis. At this stage, it's hard to see that the national level of HEPPP impact can be derived from only synthesised university level quantitative data."*

As was the case for the university level components, and as indicated in some of the above quotes, there was some concern about methodological/logistical issues in the context of generating useful evaluation insights:

> *"My concern is that the impact evaluation will be too macro-level and detached from understanding the nuanced and quantitatively intangible benefits and gains made via HEPPP initiatives - such as awareness raising, advocacy, community of practice, soft skills, soft power etc that are more complex to translate into an audited measure."*
>
> *"The biggest issue in HEPPP is the lagging nature of data at a national level. Advanced analysis of program and equity data will be useful provided it is done on a timely basis. Individual student identification in projects will also be an issue in some cases due to privacy issues."*

7.6 Further Feedback

At the end of the survey, participating stakeholders were asked if they had further comment, which was accompanied by prompts in the direction of unintended consequences, missing aspects of the framework, implementation challenges and potential benefits of implementing the SEHEEF.

Additional feedback was provided by 21 stakeholders at this point of the survey. The themes and most of the finer points within the themes that emerged mirrored those that had emerged under the previous questions:

- there was praise for the developed SEHEEF or elements thereof, for example:

  "I think the design is excellent - practical, realistic and balanced. It will be a real advance to have an evaluation framework, which the sector has been asking for since before the HEPPP evaluation. It will be important to ensure that the advances and learnings that are part of the SEHEEF project continue to inform evidence and policy as IRLSAF is developed and implemented."

  "The framework is strong conceptually and the visuals and templates clear and usable. At the National level how it is implemented will be important to its success. Improved transparency and accountability with regard to HEPPP is a positive development and should drive better use of HEPPP resources and improvement in outcomes for equity students."

- there were concerns about implementation, sometimes linked to impact evaluation, which often focused on resourcing and sometimes alerted to impacts on service delivery, for example:

  "I think impact evaluation is a worthy aspiration but will take a lot of effort and resources to pull off. There are many questions that have not been addressed by the SEHEEF which will determine whether the aspiration can be achieved. Importantly, information about the kind of expert evaluators a university would need to employ to carry out impact evaluations should be included. Who are the people who might be able to undertake that work? What kind of skills/qualifications do they need? How many would be required per university? Do we have enough of them across the country? Who pays for them? There is a risk of creating a whole new level of activity which will divert resources from student programs if universities are expected to pay for the evaluators. There may also not be enough of them to go around initially to implement the approach from 2022."

  "Are the potential benefits worth the costs? The requirement for Impact Evaluation may have the unintended consequence of universities putting undue emphasis on what would otherwise be relatively small aspects of their HEPPP activity in an effort to produce the required outputs and outcomes."

Some feedback contained suggestions to finetune/further develop certain aspects of the framework or its implementation, for example:

> *"Planning Template - new opportunities/directions/unforeseen barriers frequently emerge during the year. We consider it important for these to be acknowledged and allowed for in the planning and reporting process."*
>
> *"We support the development of Unique Identifiers similar to the UK's HEAT for Pre-access activities, however, we suggest these are only collected and tracked for in-depth activities with multiple touch points. [We run 1 hour pathways planning sessions with whole cohorts (up to 350 in a session). It would be neither feasible or desirable to track such participants]."*
>
> *"I think the framework is comprehensive and covers relevant matters. Successful implementation will take time due to the variability in institutional priorities, primary cohort demographics and available resource allocation, however if a flexible approach can be used, at least in the formative stages of implementation, it is achievable."*

Some stakeholders raised questions or requested further detail:

> *"What kind of data collection is proposed for activities involving family and community members, and prospective adult learners?"*
>
> *"Do institutions decide which programs to conduct Impact Evaluation on or does the Department play a part?"*
>
> *"One of the project's stated aims was for standardisation of reporting and evaluation and also to provide guidance regarding the length and depth of annual reports. It would be very helpful to be provided with more guidance in this regard."*

7.7 Summary and Implications

The purpose of the consultation at this point of the project was to explore the level of acceptance of the preliminary SEHEEF, to capture information to improve the preliminary SEHEEF as part of this project and to inform the further development and implementation of the SEHEEF in the longer-term.

The timeframe for the consultations was relatively tight with the survey open over a 19-day period. The 28 individual and organisational stakeholders who completed the survey constitute a small fraction of relevant stakeholders in Australia. Therefore, results from the survey cannot be seen as representative of the stakeholders in the sector.

However, the participating stakeholders did reflect many of the relevant stakeholder groups – equity practice, university administration, research, HE peak bodies - so that the themes that emerged from open-ended feedback may well be reflective of the wider sector (but not necessarily the prevalence with which they were expressed).

7.7.1 Level of Acceptance

Based on the feedback captured in the survey, the level of acceptance of the presented SEHEEF is high:

- a clear majority of between 75% and 96% strongly agree or agreed with the 16 statements that suggested a positive quality of different elements of the framework in the survey;
- Open-ended feedback commonly supported the positive agreement ratings by endorsing the framework or elements thereof although this was sometimes accompanied by qualifications, questions and suggestions to finetune/address some issues, and
- Most of the critical feedback concerned matters of implementation, which was most often related to resourcing. While a principle of the SEHEEF was to be implementable, addressing resourcing issues was not part of the scope of the project.

7.7.2 Key Themes

The open-ended feedback captured in the survey revealed a number of issues, some of which tended to emerge in all five of the included text boxes.

Need for clarifications/fine-tuning/further development of methodological framework and tools (within the rationale of the current framework)

The project duration for developing the SEHEEF was six months and included several rounds of resource intensive consultations with the sector, as described in Chapter 2. The developed framework therefore can only have preliminary character, with prototypes of tools. Further to that, respondents in the final consultation round only had access to a pre-recorded webinar and associated PowerPoint presentation, which contained a brief outline of the preliminary Framework rather than a fuller introduction of it.

One set of feedback reflected this context. This was expressed as seeking clarifications, asking for more detail or making suggestions about improving the framework or its tools. Such feedback concerned the relationship between components of the framework (e.g. between CQI and QIE), the data and reporting tools, the prioritisation tool, better accommodating institutional development type activities in the framework, details of TBIE or addressing complexities in HEPPP activities/participation, such as capturing information on multi-institutional HEPPP activities.

Some of this feedback was already at a level of detail that was beyond the stage envisaged for this project. Some of the feedback, particularly feedback related to clarifications and refinements, has been addressed in the report, including, for example: a clearer link between CQI and impact evaluation; a recognition that successful impact evaluation must involve practitioners; the challenges posed by the time lag in the availability of sector level data; multiple refinements to the wording in the Program Logic; amendments to the planning and reporting tools; the importance of specialist evaluators working closely with the teams of practitioners involved in the programs being evaluated; and an emphasis on the importance of supporting outcomes and how these are distinct from primary outcomes. However, some of this feedback, for example in relation to the design and application of prioritisation tool will need addressing in the future

The feedback under this theme confirmed the need for: testing (e.g., tools, prioritisation tool, and the process for selecting specialised evaluation teams to undertake the evaluations); piloting and further refining the SEHEEF methodology prior to wider roll-out across the sector; consultations around data privacy issues, collecting data on program participants and sharing data with the Department, and a feasibility study around a HEAT-like system to cover program participation at the Pre-Access and Access stage.

Implementation issues

There were various concerns about implementing the SEHEEF, particularly around the context of Impact Evaluation but also in the context of using the planning and other tools. These issues are broken further down below.

Resourcing

There was a notable level of concern about resourcing, relevant expertise, associated timeframes and who would pick up the bill across all five open-ended fields of the survey.

Service delivery vs evaluation

Further to that, some stakeholders were concerned about cost-benefit relationships of implementing components of the SEHEEF in universities or alerted to potential negative impacts to the delivery of services to equity groups that could arise when evaluation requirements used finite resourcing. On rare occasions, the perceived tension between delivering services and undertaking certain components of evaluation was not constrained to seeing that the latter could take away from the former but also that certain approaches of evaluation seemingly conflicted with the philosophy behind certain approaches to delivering services:

> *"We focus on whole cohorts and consider control groups to be unethical (we do not want to deny students access to potentially useful programs)."*

Evaluation focus[19]

Somewhat related to the above point, there was also feedback that expressed tensions between different evaluation approaches. Some stakeholders saw too much emphasis on Impact Evaluation, especially QIE, and/or questioned the focus on outcomes defined as primary in the SEHEEF.

External influences on evaluation

There was also some suspicion or discomfort discernible about the involvement of external players in evaluation processes. This was primarily reflected in questioning or criticising the involvement of external evaluation experts in Impact Evaluation and relying on their assessments with potential consequences for the continuation of evaluated programs, but also in enquiring about the potential role of the Department in selecting activities/programs for evaluation.

Other concerns

Other concerns expressed related to privacy in the context of data collections, and achieving collaboration between universities in the context of competition. The useability of the Excel-based tools was also questioned.

7.7.3 Implications of Feedback

All of the above listed implementation themes can be expected to emerge in most consultations about Australian HE equity practice or evaluation that target a cross-section of relevant stakeholders. A bulk of the 28 participants (n=19) identified as working in HEPPP practice or university administration, and people and organisations working in such areas are regularly confronted with juggling the allocation of resources for the benefit of students and have real life experiences about consequences of changes to funding/resourcing. That resourcing and sustainability emerged as one of the strongest themes in open-ended feedback is then plausible.

While concerns about the value of evaluation relative to delivering services were less common, such concerns are also plausible given the characteristics of participating stakeholders. They may be the result of negative experiences with evaluations or evaluators, but they may also point to a general position that the delivery of services is seen to always outrank the need for evaluation (because they are assumed to work in some way). Yet good will and commitment are no guarantee that services work well or that they at all, and without proper evaluations an assessment about the merit of the services cannot be determined. In fact, this is the premise of this and various other Government-funded projects surrounding the development of an Evaluation Framework. In this sense, an uncompromising position on the priority of service delivery at the detriment of rigorous evaluation is a barrier to implementing and achieving the longer-term objectives of the SEHEEF.

Critical and distrusting positions towards evaluation, external evaluators or DESE's role in selecting programs for evaluation could also be fed by underlying fears that evaluation scrutiny, particularly when they are perceived to be outside one's control, may jeopardise individual or organisational professional reputations or lead to imposing changes that affect how and what people do. These are common fears when circumstances of one's work change and highlight the importance of sensitive and consultative processes in advancing the SEHEEF and its implementation.

It is also no surprise that there are different notions of value among research, service and advocacy professionals, which ultimately translate into different definitions of relevant outcomes in evaluation contexts. The emphasis on (quantitative) impact evaluation that some stakeholders felt uncomfortable about reflects the core of the project scope, as does the definition of outcomes defined as primary in the SEHEEF (e.g. commencing university studies, degree completion). These are all Government priorities.

[19] This subtheme would also fit under methodological development of the SEHEEF. It is positioned to better connect with the preceding theme.

However, the SEHEEF offers flexibility in defining other outcomes. It also allows collaboration when designing methodological processes and designs of Impact Evaluation regardless of the involvement of evaluation experts who may be external to a university. The TBIE also considers a broader view of impacts and mechanisms that will involve other outcomes. Some of the concerns expressed by some stakeholders do then not appear to be directly related to the preliminary SEHEEF but to expectations about its interpretation and implementation.

It is possible that the wider elaborations in this report that were not possible in the abbreviated format of presenting the SEHEEF in a webinar can somewhat alleviate some of the above concerns. However, there is likely to remain scepticism about, and resistance to, the direction of HEPPP evaluations among groups of stakeholders if the primary outcomes as defined in this report become the only point of interest to the Government when the framework is further developed and implemented.

Altogether, the stakeholder feedback alerted to the preliminary character of the SEHEEF and the need to work on refinements in various areas within the frame of reference in which it was created. Some of this feedback could be accommodated in this final report. Other feedback will need to be considered over coming stages. The feedback also captured concerns outside the terms of reference for this project – which mainly related to implementation issues, particularly resourcing and potential negative impacts on service delivery. The feedback also unearthed some tension, even conflict between philosophical positions of professional stakeholder groups that influence definitions of value, which can affect the definition of outcomes, control groups and other features of evaluation designs.

The next chapter re-considers these issues to discuss the next steps going forward.

8. Implementing the Framework

- While the sector has been supportive of the development of a national framework to support the evaluation and continuous improvement of HEPPP-funded programs and activities, embedding change in a complex system is difficult.
- This chapter provides an overview of some key considerations for implementing the SEHEEF, which emerged from the literature review and during the consultations.
- These considerations cover governance, resources, issues around feasibility, and implementing the SEHEEF in Indigenous Higher Education contexts.
- Possible next steps for SEHEEF are outlined, including suggestions for piloting, socialisation and planning as well as a staged approach to implementation.

8.1 Chapter Introduction and Outline

> *The major issues of evaluation are management rather than methodological ones; they are about how and where evaluation should be organized, located, planned and managed to best affect decision-making. They are about managing for performance, rather than simply measuring performance.* (Shand, 1998, px)

As noted in Section 3.2, a key underpinning principle of the SEHEEF was that it was designed to be implementable. By providing tools, the SEHEEF attempts to move beyond the conceptual idea of what will happen (often the boundary of frameworks), to the level of implementation and practice. Nonetheless, implementation of the SEHEEF requires change at individual, team, and organisational levels. While the sector has been supportive of the development of a national framework to support the evaluation and continuous improvement of HEPPP-funded programs and activities, embedding change in a complex system is difficult. This chapter provides an overview of some key considerations for implementing the SEHEEF, which emerged from the literature review and during the consultations. They largely link to the stakeholder feedback reported in Chapter 7.

8.2 Governance

Successful implementation of the SEHEEF requires effective governance arrangements, leadership and sector buy-in. Governance arrangements clarify the roles including their responsibilities, and relationships.

The Department's role would be to set the direction and communicate the requirements on universities to implement the Framework. Leadership by the Department at the national level would help to provide clarity over purpose, process, and expectations for universities and other key stakeholders. The Department would also be responsible for planning and coordinating the national level SEHEEF components, including changes to routine reporting, advanced analysis of sector level data, and synthesis of university-level Impact Evaluations.

Universities would be responsible for coordinating and implementing the university-level components of the Framework including the managing and maintaining of the collection of data to support CQI for the HEPPP-funded programs and activities they deliver, the selection of programs for, and the undertaking of, impact

evaluations. If using a specialist evaluator, the latter would entail the process of tendering and managing the evaluation project.

The above sketches a high-level outline of roles only. In general, governance arrangements would need to address the relationships within Government, within universities (e.g. those involving relationships between student services, administration and data systems), between universities (e.g. related to sharing knowledge and developing standards) and between Government and universities.

The successful implementation of SEHEEF depends on the implementation of standards across universities, including standards for:

- collecting information, such as pertaining to the operational definition of information on activities, participations, outcomes, and demographics;
- data linkage, and
- the timing of data collections and reporting.

This is conditional on the concurrent motivation and cooperation of all relevant units within all relevant universities.

Generating such cooperation will be very challenging in a context in which the same universities have, for many years, been in competition with another for domestic and international students as well as research funding; and in which universities have developed their own standards in addressing equity and administering equity programs. As noted in Chapter 7, this point was raised by stakeholders during the SEHEEF consultations:

> *"At the National level, I like the concept of sharing information and ways of working with other institutions however conflict of interest and sharing information with those institutions in a competitive market needs to be managed appropriately."*

Even within the same institution, collaboration should not be taken for granted:

> *"I think there remains a challenge in synthesis of outcomes to get national level 'answers' about the success or otherwise of HEPPP overall. Consistency and commitment to reporting by individual programs within universities will no doubt be a significant barrier."*

The cooperation problem that emanates from institutional and inner-institutional competition can be exacerbated by differences in philosophical positions about designing and delivering programs and evaluations between groups of stakeholders (see Section 7.7.3).

Because of this, the governance arrangements for SEHEEF, first and foremost, need to be designed to be effective in generating the necessary cooperation between the relevant stakeholders in the given context in which they operate.

8.3 Resourcing

The resourcing of implementing the SEHEEF is a crucial consideration. While universities report to the Department in accordance with the SEHEEF, there is no specific guidance as to how much of their HEPPP funding universities should allocate to undertake program evaluation. The resources and budget devoted to evaluation should be informed by the program's profile, complexity, risks, budget and intended outcomes. Programs that have substantial budgets, are complex, large-scale, of strategic significance or high risk will typically have a larger budget for evaluation. The Impact Evaluation Prioritisation Tool presented in Section 5.3.3 addresses many of these factors.

At the national level, substantial resources and specialist expertise are required for the Department to undertake the proposed evaluation activities.

The setup and execution of governance arrangements, e.g. those between universities for knowledge sharing and exchange, or between the Government and universities to coordinate the implementation of data collections and data standards would also need to be factored in.

Concerns about resourcing were expressed by several stakeholders during the user testing of the SEHEEF (also see Chapter 7). These were at times expressed as questions: about which support the Department would provide, or more specifically, whether the Department would provide funds for the Impact Evaluations at university level, the additional reporting requirements. Some also asked who would undertake the national level evaluations.

Sometimes concerns about resourcing were linked to the quality of evaluation outputs at the university level, which could also affect national level evaluations:

> *"…I fear differences in the quality of evaluation and reporting (exacerbated by differences in knowledge and skill in evaluation) across programs and institutions."*

At other times, they pointed at a potential tension between delivering services to students and evaluation activities.

> *"…There is however a risk that if the framework outlined were in place, that we'd see an excessive proportion of funds go to administration, and real risks that students would experience negative consequences for being involved in a HEPPP funded program. Greater attention needs to be given to these issues as the framework is refined and developed."*

> *"The issues around the SEHEEF pertain to compliance and resourcing. This may be an issue at smaller institutions and in relation to smaller programs. We would emphasise that it is important that a balance be struck between SEHEEF allowing government to monitor and evaluate larger (often national) initiatives, while also ensuring that the flexibility and responsiveness of smaller programs and interventions are not minimised."*

The resourcing issue also connects with a perception that was regularly expressed in the SEHEEF consultations: that there is generally a scarcity of evaluation design expertise, even program design expertise, in the equity program areas at universities. While the SEHEEF attempts to specify components that require different levels of evaluation expertise so that some (non-QIE) components can be undertaken by non-evaluation professionals, this may still assume some level of understanding and skill among university staff that cannot be taken for granted:

> *"This is a laudable aim, and a good framework for achieving this if executed well, but I wonder to what extent the relevant units are in a position to do this well without substantial, sustained and individualised support. In our work we have gone program to program to engage them in a process of articulating (and then reducing) their aims, mapping that to outcomes and evaluation processes, and supporting data analyses."*

There are then several aspects that the resourcing of SEHEEF (or the resourcing requirements that the SEHEEF in its current form necessitates) affects:

- the quality of the collected/reported data/results – a foundation for reliable findings in relation to a program/activity;
- the consistency in the quality of the collected/reported data/results across programs/activities and/or universities – a foundation for reliable comparisons and aggregations to higher levels, and
- the growth of administration/bureaucracies and associated cultures at the cost of service delivery and associated cultures in the equity space.

The former two points concern the quality of evaluations, the latter point concerns the nature or extent of equity activities/programs themselves. As was pointed out earlier in Chapter 7 and under governance arrangements above, there is some unease in the sector about the expansion of evaluation requirements. At least on some occasions, these appear to be associated with competing ideas about designing and delivering programs as well as evaluations. The last of the three points above then also alerts that the

resourcing issue, which not only defines who pays how much, but also for what, is inevitably intertwined with dealing with potentially conflicting perspectives on evaluations.

To address the first two points the implementation of the SEHEEF could be accompanied by the implementation of a capability building model for providing evaluation advice and support to equity staff to:

- enhance skills, knowledge and confidence in planning, delivering and managing evaluation activities;
- increase adherence and commitment to the SEHEEF;
- facilitate knowledge sharing within and across universities, and
- enhance evidence-informed decision-making.

Another aspect highlighted in the SEHEEF consultations around resourcing that has implications for implementing HEPPP activities and evaluations is the length of funding rounds. The annual HEPPP funding cycle was seen as a constraint to the design and planning of projects that span multiple years. This constraint also applies to evaluation:

> *"I see issues with the amount of work in the evaluation if HEPPP funding continues to be allocated/reported on an annual basis. If this was changed to a 3-4 year cycle, there would be more opportunity for deeper theory based evaluation."*

Comprehensive, in-depth Impact Evaluation can be time-consuming, particularly if requiring a competitive tendering process. The 2-year evaluation of the Bridges to Higher Education project provides a good example of the benefits of an extended period for evaluation, particularly for larger, complex projects (KPMG, 2015).

8.4 Implementing the SEHEEF in Indigenous Higher Education contexts

The 'Behrendt Review' published in 2012 made clear the need to invest in national and institutional policies and programs that support Aboriginal and Torres Strait Islander peoples to access, participate, and succeed in the Australian HE system (Behrendt et al., 2012). One of the key recommendations within this report was the development of a national Aboriginal and Torres Strait Islander Higher Education monitoring and evaluation framework. The Job-ready Graduates package refocused HEPPP to include a specific focus on Aboriginal and Torres Strait Islander peoples, through the introduction of the IRLSAF, which from 2024 will combine the HEPPP, regional loading, and enabling loading to allow universities to use their funding more flexibly to support equity outcomes. This is expected to bring a sharper focus on the need for culturally appropriate evaluation methods.

As noted in the SEHEEF Principles (see Section 3.2), this framework has been designed to be flexible to diverse evaluation designs and methods. In doing so, the SEHEEF can align with the recently published Indigenous Evaluation Strategy, which emphasises the need to place Aboriginal and Torres Strait Islander peoples at the centre of evaluation activities. This includes drawing in the perspectives, knowledges, and priorities of Aboriginal and Torres Strait Islander people throughout all aspects of evaluation, from planning to communication of findings. This is summarised in Table 28.

Table 28 Centring Aboriginal and Torres Strait Islander people, Perspectives, Priorities and Knowledges in Practice.

What to evaluate	Aboriginal and Torres Strait Islander people are engaged to decide what policies and programs have the greatest impact on their lives and should be subject to evaluation. Evaluations consider impacts of policies and programs on Aboriginal and Torres Strait Islander people and how agencies are working with Aboriginal and Torres Strait Islander people to develop and deliver policies and programs.
Evaluation planning,design, and conduct	Evaluations draw on the perspectives, priorities and knowledges of Aboriginal and Torres Strait Islander people and communities. Mainstream policies and programs routinely consider impacts on Aboriginal and Torres Strait Islander people and evaluate where the impact is considered significant. Aboriginal and Torres Strait Islander people, organisations and communities have the opportunity to decide how they want to be involved in evaluations. Sufficient time and resources are allowed for meaningful engagement and capability strengthening with Aboriginal and Torres Strait Islander people during evaluation. Engagement between commissioners, evaluators, participants, and users is respectful of differences and undertaken in culturally safe ways. Evaluations are conducted by Aboriginal and Torres Strait Islander evaluators and/ or non-Indigenous evaluators with skills and experience working with Aboriginal and Torres Strait Islander people. Decisions about data planning, collection and use are undertaken with Aboriginal and Torres Strait Islander people so that the right data are collected, data are of high quality,and governance arrangements are in place for ownership and use of data. Evaluation design and reporting reflects the diversity of Aboriginal and Torres Strait Islander people, perspectives, priorities, and experiences
Reporting evaluation findings	Aboriginal and Torres Strait Islander people engage, partner, or lead in translating evaluation findings so they are meaningful, accessible, and useful. Evaluation reports describe how Aboriginal and Torres Strait Islander people engaged, partnered, or led during the evaluation process. Evaluators and commissioners ensure that evaluation findings are communicated back to the Aboriginal and Torres Strait Islander people, communities and organisations that participated.

Source: Adapted from the Productivity Commission (2020) Indigenous Evaluation Strategy. Note that the table is based on the overarching principle of 'Centring'. The Strategy also includes similar tables for its other Guiding Principles: Credible, Ethical, Useful, Transparent.

8.5 Socialisation, Feasibility and Planning

The SEHEEF introduced in this report provides a draft framework for evaluating HEPPP that comes with drafted standardisations for planning and reporting tools and respective categorisations (e.g. of programs), which have undergone some user testing; and it comes with an outline of some implementation issues presented in Chapter 7.7.2 and Section 8.4. The Evaluation Framework still needs a fuller appraisal by the HE sector, which could not be achieved within the timeline of this project. While 28 stakeholders of the

Australian HE sector participated in the post-webinar survey that sought feedback on the draft SEHEEF, these represent only a fraction of relevant stakeholders across the sector.

The feasibility of implementing the SEHEEF also needs further and more systematic scrutiny. What are the barriers and enablers for implementing the SEHEEF or particular components thereof? What are strategies to reduce, overcome or circumvent the barriers and maximise the enablers? Given the complex nature of relationships, interests and perspectives in the HE sector, and differences in the infrastructures and markets of universities, these questions are deserving of their own project. Among other things, this could entail the researching of effective governance arrangements and exploring how sector acceptance can change in interaction with refining evaluation features and flexibilities. It could also encompass an audit of universities' preparedness for the SEHEEF.

Aspects of the framework will need refining and piloting, including the format; resource implications need careful consideration and potentially negotiation. Privacy issues in data collections and linkages need to be worked through in detail and codified in relevant agreements and protocols. Infrastructure and administrative processes within universities, and between universities and the Government need to be developed and built taking account of differences in the context of individual universities and their existing practices and capabilities. This needs careful and long-term planning.

8.6 Next Steps

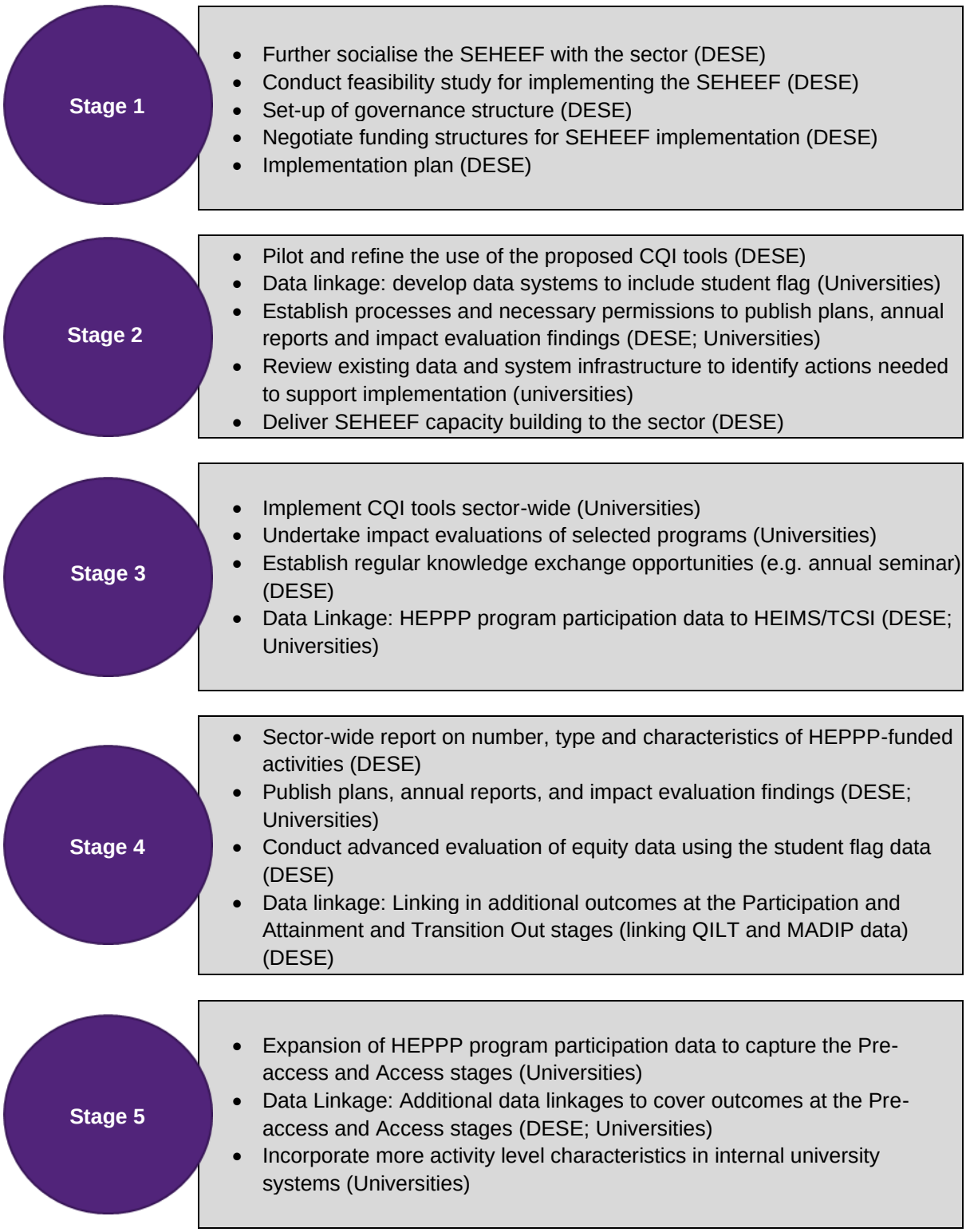
Following the brief outline of issues above, the next steps from here could therefore be:

- further socialisation of the SEHEEF to gather the sector's sentiment and inform further work on the framework;
- a feasibility and implementation study that systematically assesses the feasibilities and timeframes associated with different components of the framework, and informs what effective governance structures, resourcing and planning for the implementation should look like;
- set up of SEHEEF governance structures across the sector (informed by a feasibility study);
- negotiations about funding structures for implementing SEHEEF (between Government and universities); and
- long-term planning of SEHEEF implementation (informed by feasibility study).

8.7 Implementation Stage Scenario

Figure 16 presents an indicative scenario for a staged process for the implementation of the SEHEEF. This is for illustrative purposes only, to sketch some of the possible implementation activities and lay out how the implementation could progress over time. While implementing this sort of scenario, it will be important for the Government to consider change management challenges and strategies for managing change across the sector that could be implemented in parallel with rolling out the Evaluation Framework itself.

Figure 16. Indicative Stages for Implementing the SEHEEF (replicated in Figure 4).



Appendix A: Sector Co-Design

We would like to thank all stakeholders who contributed to this project.

Expert Advisory

Table 29. Expert Advisory Group Members

Name	Position and Affiliation
Mr Mike Teece	Policy Director, Academic, Universities Australia
Dr Dan Edwards	Research Director, Tertiary Education, Australian Council for Educational Research
Prof. Sarah O'Shea	Director, National Centre for Student Equity in Higher Education
Dr Kylie Austin	President, EPHEA Associate Director, Student Partnerships & Academic Success, University of Wollongong
Prof. Andrew Norton	Professor in the Practice of Higher Education Policy, Centre for Social Research and Methods, Australian National University
Prof. Andrew Harvey	Executive Director, Student Equity Director, Centre for Higher Education Equity and Diversity Research, La Trobe University
Dr Geoffrey Mitchell	Project Manager, Widening Participation, Queensland Department of Education

Work Package 1: Stakeholder Workshops

Table 30. Participating Stakeholders in Online Workshops, as part of Work Package 1.

Name	Position and Affiliation	Workshop
Anna Bennett	Director, Pathways and Academic Learning Support, University of Newcastle	1
Peter Bentley	Policy Advisor, Innovative Research Universities	1
Matt Brett	Director, Academic Standards and Governance, Deakin University and NCSEHE Adjunct Research Fellow	1
Michael Cornish	Policy Advisor, The Group of Eight	1
Kate Duyvestyn	Director, Access, Inclusion and Success, Monash University	1
Sarah Fletcher	Director Student Engagement, Charles Darwin University	1
Sam Jacob	Acting PVC, Student Engagement and Success, Charles Darwin University	1
Ron Keamy	Associate Professor, Centre for Program Evaluation	1
Kay Lembo	Manager, Outreach (Australia), The University of Queensland	1
Matt Lumb	Associate Director, Centre of Excellence for Equity in Higher Education, The University of Newcastle	1
Lindsay Parry	Associate Dean Learning Futures, College of Indigenous Futures, Education and the Arts, Charles Darwin University	1
Sophie Partridge	Senior Manager, Engagement Programs, Western Sydney University	1
Losana Ravulo	Widening Participation Engagement Project Officer, Western Sydney University	1
James Smith	Professor, Charles Darwin University	1
Mike Teece	Policy Director, Academic, Universities Australia	1
Guzyal Hill	Senior Lecturer, Asia Pacific College of Business and Law, Charles Darwin University	1
Maneka Jayasinghe	Senior Lecturer in Economics, Asia Pacific College of Business and Law, Charles Darwin University	1
Tara Broadhurst	Manager (Student Equity), The University of Western Australia	2
Nicola Cull	National Manager, Equity Pathways & NSW Equity Practitioners in Higher Education Australasia Convenor, Australian Catholic University	2
Naomi Dempsey	Interim Deputy Provost (Students & Academic Services), Victoria University	2
Dan Edwards	Research Director, Tertiary Education, Australian Council for Educational Research	2
Leanne Haggart	Senior Advisor, Equity and Inclusion, Curtin University of Technology	2
Katy Head	Deputy Director, Access and Equity (Students), University of New South Wales	
Wes Heberlein	Senior Coordinator, Student Engagement, Central Queensland University	2
Lizzie Knight	Research Fellow, Centre for International Research on Education Systems, Victoria University	2
Patrick Korbel	Senior Policy Analyst, The Australian Technology Network of Universities	2
Theresa Lauf	Director, Equity, Queensland University of Technology	2
Darlene McLennan	Manager, Australian Disability Clearinghouse on Education and Training	2
Cate Morris	Project Officer (Student Equity), The University of Western Australia	2
Sarah O'Shea	Director, National Centre for Student Equity in Higher Education	2
Tina Osman	Associate Director, Participation & Pathways | Division of Student Experience and Engagement, Charles Sturt University	2

Name	Position and Affiliation	Workshop
Joanne Perry	Deputy Vice President, Students, Central Queensland University	2
Lara Rafferty	Associate Director, Student Diversity and Inclusion, Royal Melbourne Institute of Technology University	2
Kylie Readman	Pro Vice Chancellor Education, Murdoch University	2
Tamsyn Richards	Reporting and Governance Manager, Domestic Recruitment and Access, The University of Sydney	2
Cate Rooney	Student Access and Equity Manager, Central Queensland University	2
Larissa Siliezar	Manager, Student Equity and Wellbeing, James Cook University	2
Sonal Singh	Manager, Student Equity, University of Technology (Sydney)	2
Mary Teague	Director, Access and Equity (Students), University of New South Wales	2
Les Trudzik	Director, ACIL Allen	2
Syed Gafoor	Principal Consultant | Student Services & Wellbeing, Queensland University of Technology	2
Emily O'Brien	Data and Funding Coordinator, Monitoring and Reporting Team, University of New England	2
Peter Osborne	Manager - Inclusion Strategy, Engagement and Partnerships, Deakin University	3
Michelle Wear	Deputy Registrar, Griffith University	3
Carolina Morison	Senior Evaluations Officer, Macquarie University	3
Dene Cicci	Executive Director Students, Royal Melbourne Institute of Technology University	3
Louise Mitchell	Acting Manager, Wirltu Yarlu, The University of Adelaide	3
Geoffrey Mitchell	Project Manager, Widening Participation, Queensland Department of Education	3
Katie Osborne-Crowley	Strategic Initiatives Manager, University of New South Wales	3
Ryan Naylor	Associate Professor (Education), University of Sydney	3
Kylie Austin	President, EPHEA	3
Veronica Sanmarco	Manager, Access and Diversity, University of Sunshine Coast	3
Tony Reed	Academic Registrar and Director, Student Services, University of the Sunshine Coast	3
Nadine Zacharias	Director, Student Engagement, Swinburne University of Technology	3
Kelly Linden	Sub-Dean Learning and Teaching, Faculty of Science, Charles Sturt University	3
Prue Gonzalez	Academic Lead, HEPPP Retention Team, Charles Sturt University	3
Rajan Martin	Assistant Secretary, Governance, Quality and Access Branch, DESE	3
Amanda Franzi	Director, Equity Policy, Governance, Quality and Access Branch, DESE	3
Laura Barwick	Assistant Director, Equity Policy, Governance, Quality and Access Branch, DESE	3
Lachlan Cameron	Director, Higher Education Program Management, Governance, Quality and Access Branch, DESE	3
Kerryn Traynor-Brack	Assistant Director, Higher Education Program Management, Governance, Quality and Access Branch, DESE	3
Michael Hanslip	Assistant Director, Employment Services Evaluation, Employment Research and Evaluation Branch, DESE	3

Work Package 2: Consultation with Data Experts and Data Custodians

Table 31. Stakeholders involved in Data Consultation Meetings.

First Name	Surname	Title, Agency	Level
George	Bodilsen	Data Governance Group, Australian Institute of Health and Welfare	Australian Government
Trevor	Burton	Director, Service Design and Delivery, USI Branch, School and Youth Group, DESE	Australian Government
Wayne	Shippley	Director, University Statistics, Market Analysis and Data Branch, DESE	Australian Government
Phil	Aungles	Director, Performance and Analysis, Market Analysis and Data Branch, DESE	Australian Government
James	Griffiths	Data Scientist, Integrated Data Analytics, Data Analytics Branch, DESE	Australian Government
Oliver	Berry	Assistant Director, Integrated Data Analytics, Data Analytics Branch, DESE	Australian Government
Sam	Pietsch	Assistant Director, Performance and Analysis, Market Analysis and Data Branch, DESE	Australian Government
Peta	Brill	Director, HELP Policy, HELP and Provider Integrity Branch, DESE	Australian Government
Sarah	Dinsmore	Assistant Director, National Skills Commission	Australian Government
Rob	Young	HEAT Member Consultant, HEAT, data infrastructure	Higher Education Access Tracker
Catherine	Lee	Strategic Policy, NSW Department of Education	NSW Government
Erik	Nadeau	Principal Systems Officer, NSW Department of Education, Centre for Education Statistics and Evaluation, NSW Department of Education	NSW Government
Geoffrey	Mitchell	Project Manager, Widening Participation, Queensland Department of Education	Queensland Department of Education
Glen	Whitaker	Director, Collections and Reporting, Queensland Department of Education	Queensland Government
Bianca	Byrne	Assistant Director, Data Integration Assembly, Data Strategy, Integration and Services Division, Australian Bureau of Statistics	Statutory body of the Australian Government
Talei	Parker	Assistant Director, Data Services, Data Strategy, Integration and Services Division, Australian Bureau of Statistics	Statutory body of the Australian Government
Peter	Titmanis	General Manager, Assessment and Reporting, Australian Curriculum, Assessment and Reporting Authority	Statutory body of the Australian Government
Claude	Jones	Director of Assessment and Reporting, Queensland Curriculum and Assessment Authority	Statutory body of the Queensland Government
Kay	Lembo	Manager, Outreach (Australia), The University of Queensland	The University of Queensland
Francis	Mitrou	Adjunct Associate Professor, UWA Centre for Child Health Research	The University of Western Australia
Paul	Koshy	Research Fellow, National Centre for Student Equity in Higher Education, National Centre for Student Equity in Higher Education	Curtin University
James	Smith	Professor, Charles Darwin University, Menzies School of Health Research	Menzies School of Health Research

Work Package 3: Consultation with Sector on the Preliminary Framework

Table 32. Individuals and Organisations who Provided Feedback via the Post-Webinar Survey.

Individual / Organisation
Peter Bentley, Policy Advisor, Innovative Research Universities
Matt Brett, Director, Academic Standards and Governance, Deakin University and NCSEHE Adjunct Research Fellow
Darren Brown, Director, Employability and Success, Victoria University
Naomi Dempsey, Interim Deputy Provost (Students & Academic Services), Victoria University
Dan Edwards, Research Director, Tertiary Education, ACER
Equity Practitioners in Higher Education Australasia
Sarah Fletcher, Director Student Engagement, Charles Darwin University
Sarah Glencross, Coordinator Access and HEPPP Evaluations, Access and Diversity, Community Engagement, University of the Sunshine Coast
Sharlene Gordon, Director, Higher Education Integrity Unit, University of Southern Queensland
Alison Green, Social Inclusion Evaluation and Policy Coordinator, Queensland University of Technology
Leanne Haggart, Senior Advisor, Equity and Inclusion, Curtin University
Genevieve Haskett, Manager, Education Pathways, Flinders University
Steven Howard, Head of Postgraduate Studies, School of Education | Early Start, Faculty of the Arts, Social Sciences and Humanities, University of Wollongong
Kay Lembo, Manager, Outreach (Australia), The University of Queensland
Matt Lumb, Associate Director, Centre of Excellence for Equity in Higher Education, The University of Newcastle
Andrea Lynch, Dean, Learning, Teaching and Student Engagement, James Cook University
Geoffrey Mitchell, Project Manager, Widening Participation, Queensland Department of Education
Carolina Morison, Senior Evaluations Officer, Macquarie University
National Centre for Student Equity in Higher Education
Peter Osborne, Manager – Inclusion Strategy, Engagement and Partnerships, Deakin University
Losana Ravulo, Widening Participation Engagement Project Officer, Western Sydney University
Cathy Stone, Independent Consultant & Researcher, University of Newcastle
Swinburne University of Technology
Teresa Tjia, Dean of Students and Registrar, Federation University Australia
Tertiary Education Quality and Standards Agency
Universities Australia

Appendix B. Summary of Life Stage Models

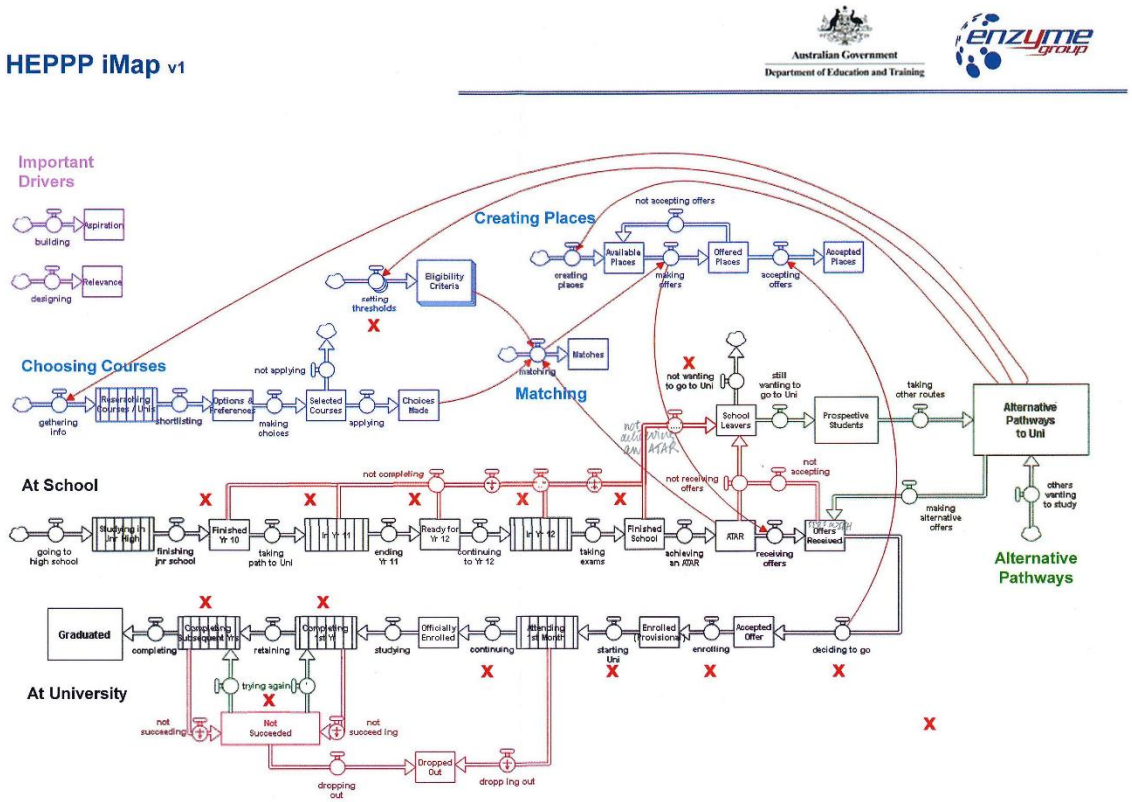
Table 33. Summary of Key Components of Life Stage Models, from the Equity and Education Literature.

Authors	Key components of the life stages
Sawhill et al. (2013)	1. Early childhood 2. Middle childhood 3. Adolescence 4. Young adulthood 5. Adulthood
Naylor et al. (2013)	• Access (Pre-entry, admissions) • Participation (Transition, during studies) • Progress and Attainment (successful completion and graduate employment)
Pitman and Koshy (2015)	The authors propose three tiers (and domains): 1. Pre-Higher Education (early childhood, primary, education, secondary education) 2. Higher Education (Aspirations for higher education, access to higher education and achievement in higher education) 3. Post-Higher Education (graduate outcomes)
Lamb et al. (2015)	Life stages and associated milestones[20]: 1. Early years: the milestone is the proportion of children who are developmentally ready at the point of entry to school, as measured across five domains: physical health and wellbeing, social competence, emotional maturity, language and cognitive skills, and communication skills. 2. Middle years: the milestone is the proportion of year 7 students who meet or exceed international proficiency standards in academic skills. 3. Senior school years: the milestone is the proportion of young people who have completed school and attained a year 12 certificate or equivalent. 4. Early adulthood: the milestone is the percentage of 24-year-olds who are fully engaged in education, training or work.
Bennett et al. (2015) and built upon Naylor et al. (2013)	1. Pre-Access (Outreach to schools and communities) 2. Access (Pathways and Admissions, Including Enabling Pathways) 3. Participation Transition, Engagement and Progression (Undergraduate and Postgraduate) 4. Attainment and Transition out (Attainment, Transition out)
ACIL Allen Consulting (2017)	In this review, the effectiveness of the HEPPP was considered within the four stages of the student life course in which equity initiatives can take place: 1. Pre-Access: Outreach to Schools and Communities 2. Access: Pathways and Admissions (including Enabling Pathways) 3. Participation: Transition, Engagement and Progression 4. Attainment and Transition Out.

Appendix C: Draft or Previously Developed Visuals

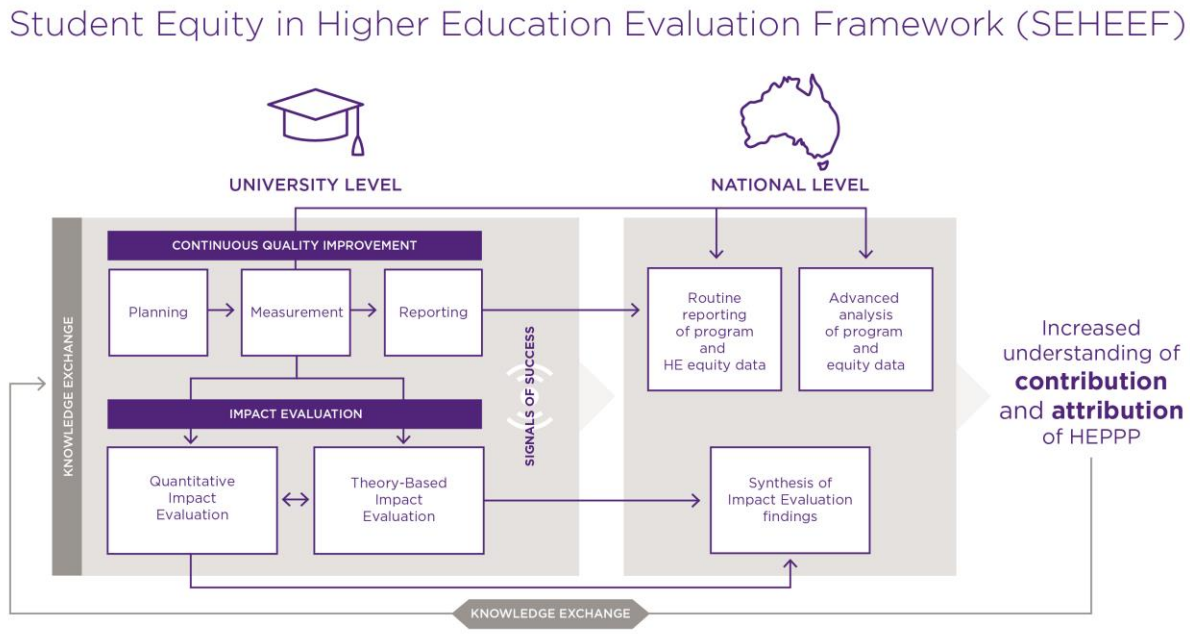
System Map, Enzyme Consulting Group

Figure 17. The System Map prepared by Enzyme Consulting Group for DESE.



The Preliminary (draft) SEHEEF

Figure 18: The Preliminary SEHEEF Overview Visual used in the Consultation



Appendix D: Administrative Data

Administrative Data: National Level

Table 34. Administrative Data: National Level. Tertiary Collection of Student Information (TCSI)

Tertiary Collection of Student Information (TCSI)
[replacing Higher Education Student Data Collection (HEIMS)]
Description: HEIMS/TCSI is a comprehensive dataset containing records of all Australian students, including information on enrolment, completions, load, as well as demographic characteristics. Higher education providers are required to upload their students' records to the system. More information: https://www.tcsisupport.gov.au **Student life stages relevant to the outcomes covered**: Participation **Outcomes covered:** ***Initial:*** • N/A ***Interim:*** • Records of academic load, including information on the status of a particular unit (pass/fail; no grades are reported) • Records of enrolments, which capture enrolment in subsequent years but do not capture progression through the course (e.g. number of semester/ year within a course) ***Final:*** • Data on commencements - Information on which students commenced their studies (the commencing student flag) • Data on degree completions, including year, course, institution, field of education, etc., as well as time to completion • Success indicators: proportion of failed/passed courses • HDR course commencements **Other relevant information covered:** • Age, gender • Highest attainment - the highest level of prior educational achievement successfully completed by the student • ATAR, Selection rank (ATAR, adjusted ATAR, ATAR equivalent) - could be used along with the Basis for admission code; Highest qualification or attainment code and year left school • Highest educational attainment of parents (the data were not complete for older cohorts) • NESB - country of birth, year of arrival in Australia, language spoken at home; disability code Aboriginal and Torres Strait Islander code; Low-SES based on the system-recorded address • Data on: institution, field of education, mode and type of attendance

Tertiary Collection of Student Information (TCSI)

Existing linkages:

- Extracts of the data are included in MADIP. Additionally, the data are linked to LSAY results along with NAPLAN and senior secondary school subject results.

Comments/caveats:

- Includes data on commencing HE students only. Does not capture information on school students who do not enrol in HE (i.e. which may be relevant for constructing counterfactuals or control groups in the 'before university' phase).

Table 35. Administrative Data: National Level. University Applications and Offers Data Collection

University Applications and Offers Data Collection

Description:
The collection comprises records for applications for admission to an undergraduate course submitted either through a tertiary admission centre or directly to a Table A or Table B provider.

More information:
https://heimshelp.dese.gov.au/resources/apps-offers-data-collection
https://heimshelp.dese.gov.au/2020_data_requirements/2020applicationsandoffers/apps-offers-2020

Student life stages relevant to the outcomes covered: Pre-Access
Outcomes covered:
Initial:

- N/A

Interim:

- Data on applications - Information on which students applied to which university
- ATAR of university applicants (the collection comprises records for university applicants only)

Final:

- N/A

Other relevant information covered:

- Age, gender
- Highest attainment - the highest level of prior educational achievement successfully completed by the student
- ATAR, Selection rank (ATAR, adjusted ATAR, ATAR equivalent; Highest qualification or attainment code and year left school
- Highest educational attainment of parents (incomplete data for older cohorts)
- NESB - country of birth, year of arrival in Australia, language spoken at home; disability code; Aboriginal and Torres Strait Islander code; Low-SES based on the address reported in the system

Existing linkages:

- N/A

Comments/caveats:

- Includes records of Australian institutions only. Does not capture Australian school leavers applying to universities abroad.
- Includes data on university applicants only. Does not capture information on school leavers who do not apply to any university (i.e. only positive outcome captured for pre-access/access stage).

Table 36. Administrative Data: National Level. NCVER, Total VET Activity Data, National Apprentice and Trainee Collection

NCVER: Total VET Activity (TVA) data, National Apprentice and Trainee Collection

Description:
The collection comprises records of VET courses taken by students as well as obtained credentials. All registered training organisations (RTOs) are required to provide data on their training activity to the system at least once a year.

More information:

- https://www.ncver.edu.au/research-and-statistics/collections/students-and-courses-collection ;
- https://www.ncver.edu.au/__data/assets/pdf_file/0042/9661785/NCVER_DMS-209229-v1D-TVA_2019__Terms_and_definitions.pdf ; https://www.ncver.edu.au/__data/assets/pdf_file/0022/62383/AVETMISS-Data-element-definitions-2_3-PORTAL-VERSION.pdf

Student life stages relevant to the outcomes covered: Pre-Access
Outcomes covered:
Initial:

- N/A

Interim:

- Detailed data on VET courses and credentials acquired
- Detailed data on apprentices and trainees

Final:

- N/A

Other relevant information covered:

- Age, gender
- Labour market status
- Highest attainment - the highest level of prior educational achievement completed by the student
- NESB status, RRR status; disability; Aboriginal and Torres Strait Islander status, SEIFA Index of Relative Disadvantage (IRSD)
- Characteristics of VET courses taken, including field of education, Full-time status, full year training equivalent, etc.

Existing linkages:

- The collection uses USI to identify students, which means that it will be possible to link records to other records on education. Moreover, the records from the collection have been linked to the MADIP spine.

Comments/caveats:

- Data is complex and will require a lot of pre-processing before analysis can commence.

Table 37. Administrative Data: National Level. Australian Taxation Office (through MADIP)

Australian Taxation Office (through MADIP)
Description: Australian Taxation Office's (ATO) data available in MADIP include both records for annual Income Tax Returns, including various types of income, as well as Payment Summaries (Pay As You Go records) with records of employment payments and amounts withheld during a financial year. Income Tax Returns are available for financial years 2010-11 to 2018-19. Payment Summaries cover financial years 2010-11 to 2019-20. More information: • https://www.abs.gov.au/websitedbs/D3310114.nsf/home/Statistical+Data+Integration+-+MADIP+data+and+legislation ; https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/1900.0Main%20Features5Australia?opendocument&tabname=Summary&prodno=1900.0&issue=Australia&num=&view=#MADIP **Student life stages relevant to the outcomes covered**: Participation **Outcomes covered:** ***Initial:*** • N/A ***Interim:*** • N/A ***Final:*** • Annual income (Income Tax Returns and Payment Summaries); • Occupation **Other relevant information covered:** • N/A **Existing linkages:** Extracts of the data are included in MADIP. Other sources of data have been linked to MADIP for specific projects. These include: • Australian Immunisation Register • Early Childhood Education and Care • Child Care • Community Development Program datasets: - Remote Jobs and Communities Program - Community Development Program - Indigenous Employment Program - Job Services Australia - Jobactive - Transition to work

Australian Taxation Office (through MADIP)

  - Time to Work
  - Parents Next
  - Disability Employment Services
- Data Exchange (for social services)
- Employment Services System
- Household Income and Expenditure Survey
- Labour Market Activity
- National Assessment Program Literacy and Numeracy (NAPLAN)
- National Disability Insurance Scheme
- New South Wales Apprenticeships and Traineeships
- New South Wales Cancer Registry
- New South Wales Higher Education
- New South Wales Higher School Certificate; Record of School Achievement
- New South Wales NAPLAN Years 7 and 9
- New South Wales School Reference File
- New South Wales School and Teacher Characteristics
- New South Wales Student Outcomes Survey
- New South Wales TAFE Student Characteristics, Qualifications, Enrolment and Attainment
- New South Wales Teacher Accreditation
- New South Wales Upper Secondary School
- New South Wales Vocational Education and Training (VET) Funded Provider Collection
- New South Wales VET in Schools
- Post Program Monitoring Surveys (for social services)
- Total VET Activity
- Transgenerational Data Set (for social services)
- Victorian Out of Home Care
- Youth in Focus Survey

Comments/caveats:

- Linking parental tax records offers a possible way to ascertain the material situation of children at earlier stages of the student life course.

Table 38. Administrative Data: National Level. Medicare Benefits Schedule (MBS) & Pharmaceutical Benefits Scheme (PBS)

Medical data: Medicare Benefits Schedule (MBS) & Pharmaceutical Benefits Scheme (PBS) (through MADIP)

Description:
The Department of Health provides PBS and MBS data that are available within MADIP. The data include records of prescriptions as well as Medicare-subsidised health care services. The records cover years between 2006 and 2020.

More information:

- https://www.abs.gov.au/websitedbs/D3310114.nsf/home/Statistical+Data+Integration+-+MADIP+data+and+legislation ; https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/1900.0Main%20Features5Australia?opendocument&tabname=Summary&prodno=1900.0&issue=Australia&num=&view=#MADIP

Student life stages relevant to the outcomes covered: Participation

Outcomes covered:
Initial:

- N/A

Interim:

- N/A

Final:

- Health data based on the Pharmaceutical Benefits Scheme (PBS) [use of prescription medicines] and the Medicare Benefits Schedule (MBS) [use of medical services]

Other relevant information covered:

- N/A

Existing linkages:

- Extracts of the data are part of MADIP

Comments/caveats:

- The data do not capture all services and medications. “Blind spots” include treatments obtained outside the system, private prescriptions, over-the-counter medicines, drugs supplied to public-hospital inpatients, and some Aboriginal health services.

Table 39. Administrative Data: National Level. Census of Population and Housing

Census of Population and Housing (through MADIP)
Description: The Census aims at collecting information about the key characteristics of the entire Australian population. It takes place every five years. MADIP data can include either 2011 or 2016 edition (but not both in a single data extract). More information: • https://www.abs.gov.au/websitedbs/D3310114.nsf/home/Statistical+Data+Integration+-+MADIP+data+and+legislation ; https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/1900.0Main%20Features5Australia?opendocument&tabname=Summary&prodno=1900.0&issue=Australia&num=&view=#MADIP **Student life stages relevant to the outcomes covered**: Participation **Outcomes covered:** ***Initial:*** • N/A ***Interim:*** • N/A ***Final:*** • Income bands, • Labour market status • Occupation and industry • Family situation • Housing conditions **Other relevant information covered:** • N/A **Existing linkages:** • Extracts of the data are part of MADIP. **Comments/caveats:** • It is not possible to link more than one wave of Census.

Table 40. Administrative Data: National Level. SSRI/Domino

SSRI/Domino (through MADIP)
Description: The dataset comprises records of government payments made between 2009 and 2020. The data are provided by the Department of Social Services. More information: • https://www.abs.gov.au/websitedbs/D3310114.nsf/home/Statistical+Data+Integration+-+MADIP+data+and+legislation ; https://www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/1900.0Main%20Features5Australia?opendocument&tabname=Summary&prodno=1900.0&issue=Australia&num=&view=#MADIP **Student life stages relevant to the outcomes covered**: Participation **Outcomes covered:** ***Initial:*** • Means-tested benefits paid to parents - a potential measure of financial hardship ***Interim:*** • N/A ***Final:*** • Unemployment-related benefits • Welfare payments receipt **Other relevant information covered:** • N/A **Existing linkages:** • Extracts of the data are part of MADIP. **Comments/caveats:** • Linking parental records on benefits to children offers a possible way to ascertain the material situation at earlier stages.

Table 41. Administrative Data: National Level. ACARA: School Data

The Australian Curriculum, Assessment and Reporting Authority (ACARA): School data

Description:
ACARA collects aggregated, nationally comparable information about schools, including: school characteristics and data on attendance, enrolments, as well as senior subjects and Y12 certificates.

More information:
https://www.acara.edu.au/
Student life stages relevant to the outcomes covered: Pre-Access
Outcomes covered:
Initial:

- N/A

Interim:

- Attendance
- Enrolments
- Student participation and achievement in NAPLAN (school level)
- Participation in vocational education and training (VET)
- Senior subjects
- Y12 certificates

Final:

- N/A

Other relevant information covered:

- School type;
- Index of Community Socio-Educational Advantage (ICSEA)
- Distribution of Socio-Educational Advantage (SEA)
- Staff-student ratio

Existing linkages:

- Individual-level data linkages are not possible. Only school-level data can be linked to other sources.

Comments/caveats:

- Data are aggregated at the school level by year level.

Table 42. Administrative Data: National Level. ACARA: NAPLAN Data

The Australian Curriculum, Assessment and Reporting Authority (ACARA): NAPLAN Data

Description:
ACARA holds de-identified, student level data from the National Assessment Program – Literacy and Numeracy (NAPLAN). NAPLAN aims at assessing reading, writing, spelling, grammar and punctuation, and numeracy skills of all students in Year 3, 5, 7 and 9.

More information:
https://www.acara.edu.au/
Student life stages relevant to the outcomes covered: Pre-Access
Outcomes covered:
Initial:

- N/A

Interim:

- Assessment of reading, writing, spelling, grammar and punctuation, and numeracy skills of all students in Year 3, 5, 7 and 9

Final:

- N/A

Other relevant information covered:

- Age, sex
- Remoteness code
- Indigenous Status
- School sector
- Language background other than English
- Parental education and occupation

Existing linkages:

- N/A

Comments/caveats:

- NAPLAN records are at the individual student level but are deidentified preventing further linkages.

Table 43. Administrative Data: National Level. Australian Early Development Census

Australian Early Development Census
Description: The Australian Early Development Census (AEDC) measures Australian children development levels when they start school. The study measures development in five domains: physical health and well-being; social competence; emotional maturity; language and cognitive skills; as well as communication skills and general knowledge. The data are collected from the teachers who assess children. The data does not capture any outcomes relevant to SEHEEF but could be a source of information extract important control variables (if linked with other data). More information: https://www.aedc.gov.au **Student life stages relevant to the outcomes covered**: Pre-Access **Outcomes covered:** ***Initial:*** • N/A ***Interim:*** • N/A ***Final:*** • N/A **Other relevant information covered:** • Age, sex • Measures of development in five domains: physical health and well-being; social competence; emotional maturity; language and cognitive skills; as well as communication skills and general knowledge; the Multiple Strength Indicator (MSI) measuring children's developmental strengths • Special needs status • Aboriginal/Torres Strait Islander status; English as a second language status; country of birth, Geographic location in which the child lives **Existing linkages:** • The AEDC states that the data can be linked to other data sources. ISSR has already accessed AEDC data linked to Tasmanian school data. The 2009, 2012, 2015, and 2018 editions are available in MADIP. **Comments/caveats:** • N/A

Administrative Data: State/Territory and Local Level

Table 44. Administrative Data: State/Territory & Local Level. School Data (Government, Catholic and Independent)

School data (Government, Catholic and Independent)
Description: State and territories hold most of the relevant data for the Pre-access: during school stage at an individual student level, including on attendance, enrolment, senior subjects, and NAPLAN test results. The data are compiled and might be distributed across multiple agencies. State Departments of Education collect data only on government-run schools. State-based Catholic Education Commissions hold data for the Catholic sector in a particular state. State-based Independent Schools Associations hold data for independent schools. More information: ACT • ACT Education Directorate https://www.education.act.gov.au • The Association of Independent Schools of the ACT (AISACT) https://ais.act.edu.au • The Catholic Education Office in the Archdiocese of Canberra and Goulburn https://cg.catholic.edu.au NSW • New South Wales Department of Education https://www.education.nsw.gov.au • Association of Independent Schools of New South Wales https://www.aisnsw.edu.au NT • NT Department of Education https://education.nt.gov.au • Association of Independent Schools of the Northern Territory https://www.aisnt.asn.au QLD • QLD Department of Education https://education.qld.gov.au • Independent Schools Queensland https://www.isq.qld.edu.au • Queensland Catholic Education Commission https://qcec.catholic.edu.au SA • SA Department for Education https://www.education.sa.gov.au • The Association of Independent Schools of South Australia https://www.ais.sa.edu.au • Catholic Education South Australia https://www.cesa.catholic.edu.au TAS • Tasmanian Department of Education https://www.education.tas.gov.au • Independent Schools Tasmania https://independentschools.tas.edu.au

School data (Government, Catholic and Independent)

- Catholic Education Tasmania https://www.catholic.tas.edu.au

VIC

- Victorian Department of Education and Training https://www.education.vic.gov.au/Pages/default.aspx
- Independent Schools Victoria https://is.vic.edu.au
- Catholic Education Commission of Victoria https://www.cecv.catholic.edu.au

WA

- WA Department of Education https://www.education.wa.edu.au
- Association of Independent Schools of Western Australia https://www.ais.wa.edu.au
- Catholic Education Western Australia https://www.cewa.edu.au

Student life stages relevant to the outcomes covered: Pre-Access
Outcomes covered:
Initial:

- N/A

Interim:

- Enrolments
- Attendance
- Senior subjects
- Y12 certificates
- NAPLAN results - Assessment of reading, writing, spelling, grammar and punctuation, and numeracy skills of students in Year 3, 5, 7 and 9

***Final*:**

- N/A

Other relevant information covered:

- N/A

Existing linkages:

- The Pathways project (NSW) is an example of a successful linkage of state educational records with commonwealth data assets included in MADIP.

Comments/caveats:

- Not all types of information are comparable across states.
- Data for some non-government schools might need to be collected directly from schools as reporting is less consistent outside of the government sector.

Table 45. Administrative Data: State/Territory & Local Level. State Assessment Authorities

State assessment authorities

Description:
State assessment authorities are statutory bodies responsible for the development of educational standards, the accreditation of courses, and the assessment and certification of senior secondary students' achievement. They collect information on senior subjects across all sectors, government, independent, and catholic.

More information:
ACT

9. ACT Board of Senior Secondary Studies http://www.bsss.act.edu.au

NSW

10. NSW Education Standards Authority https://www.educationstandards.nsw.edu.au

NT

11. Northern Territory Board of Studies https://nt.gov.au/learning/primary-and-secondary-students/northern-territory-board-of-studies

QLD

12. Queensland Curriculum and Assessment Authority https://www.qcaa.qld.edu.au

SA

13. SACE Board of South Australia https://www.sace.sa.edu.au

TAS

14. Office of Tasmanian Assessment, Standards and Certification https://www.tasc.tas.gov.au

VIC

15. Victorian Curriculum and Assessment Authority https://www.vcaa.vic.edu.au

WA

16. School Curriculum and Standards Authority https://scsa.wa.edu.au

Student life stages relevant to the outcomes covered: Pre-Access
Outcomes covered:
Initial:

- N/A

Interim:

- Senior subjects
- Y12 certificates
- VET qualifications

***Final*:**

- N/A

Other relevant information covered:

- N/A

Existing linkages:

State assessment authorities

- LSAY is an example of linking data on senior subjects to a survey.

Comments/caveats:

- Not all types of information are comparable across states.

Table 46. Administrative Data: State/Territory & Local Level. NAPLAN Test Administration Authorities

NAPLAN Test administration authorities
Description: ACARA develops and manages NAPLAN, but it delegates the administration of the tests in jurisdictions to Test Administration Authorities. These include: • ACT Education Directorate • NSW Education Standards Authority • NT Department of Education • QLD Curriculum and Assessment Authority • SA Department for Education • TAS Department of Education • VIC Curriculum and Assessment Authority • WA School Curriculum and Standards Authority **Student life stages relevant to the outcomes covered**: Pre-Access **Outcomes covered:** ***Initial:*** • N/A ***Interim:*** • NAPLAN results - Assessment of reading, writing, spelling, grammar and punctuation, and numeracy skills of students in Year 3, 5, 7 and 9 ***Final*:** • N/A **Other relevant information covered:** • N/A **Existing linkages:** The examples of NAPLAN linkages include: • Linking NAPLAN results to surveys such as LSAC, LSAY, and LSIC • Queensland health data were linked with NAPLAN • NAPLAN results are routinely linked with other educational data for students in Government schools by State Departments of Education **Comments/caveats:**

Table 47. Administrative Data: State/Territory & Local Level. Tertiary Admission Centres

Tertiary Admission Centres (TAC)
Description: TACs include: • Universities Admissions Centre (UAC) in New South Wales and the Australian Capital Territory, • South Australian Tertiary Admissions Centre (SATAC) in South Australia and the Northern Territory, • Victorian Tertiary Admissions Centre (VTAC) in Victoria, • Tertiary Institutions Service Centre (TISC) in Western Australia, • Queensland Tertiary Admissions Centre (QTAC) in Queensland, • University of Tasmania in Tasmania. TACs are organisations established to handle applications and offers on behalf of the universities. They are also responsible for calculating Australian Tertiary Admission Rank (ATAR). More information: ACT & NSW • https://www.uac.edu.au SA & NT • http://www.satac.edu.au QLD • https://www.qtac.edu.au TAS • https://www.utas.edu.au VIC • https://www.vtac.edu.au WA • https://tisc.edu.au/static/home.tisc **Student life stages relevant to the outcomes covered**: Pre-Access **Outcomes covered:** ***Initial:*** • N/A ***Interim:*** • ATAR • Senior subjects • Other information used in applications (e.g. employment) • University applications

Tertiary Admission Centres (TAC)

Final:

- N/A

Other relevant information covered:

- N/A

Existing linkages:

- N/A

Comments/caveats:

- ATAR is nationally recognised, but the methodology of calculating differs between states (e.g. which subsects are used to calculate the score). TACs have processes for assuring broad comparability of ATARs at the national level.
- Application data are limited to participating institutions (e.g. no interstate applications are captured).

Population Surveys: National

Table 48. Population Surveys: National Level. QILT Student Experience Survey

QILT Student Experience Survey

Description:
The survey targets commencing and later year students (both undergraduate and postgraduate). The survey typically focuses on onshore students, but in 2020 the survey was extended to students who intended to study onshore but were prevented from doing so by the government travel restrictions. In 2020, 693,471 students were invited to participate in the study, with an overall response rate of 44%.

More information:

- https://www.qilt.edu.au/qilt-surveys/student-experience

Student life stages relevant to the outcomes covered: Participation
Outcomes covered:
Initial:

- Sense of belonging and social interactions captured by the learner engagement module
- Skills development module, including questions on the extent the course has developed students' ability to work effectively with others, the confidence to learn independently as well as critical thinking, ability to solve complex problems, and knowledge of field studying
- Development of work-related knowledge and skills
- Material resources needed to study

Interim:

- Learner engagement
- Preparedness for study
- Intention to drop out
- Grade average as a value between 0 and 100 (banded)

***Final*:**

- N/A

Other relevant information covered:

- Age, sex
- Previous university experience
- Socio-economic status, location, Indigenous status, language spoken at home, disability, first in the family (All equity variables are transferred from HEIMS)
- Field of education, mode of study

Existing linkages:

- HEIMS underpins the sample. The survey results can be easily linked to HEIMS data.

Comments/caveats:

- There is potential for selection bias, driven by the opt-in nature of survey completion, which could undermine the reliability of statistical estimates.
- Response rates are relatively low (e.g. 44% in 2020), resulting in a limited coverage of the student population.

Table 49. Population Surveys: National Level. QILT Graduate Outcomes Survey

QILT Graduate Outcomes Survey (GOS)

Description:

The GOS is an annual survey of graduates of participating Australian higher education institutions, including all 41 universities and 71 Non-University Higher Education Institutions. The survey was first implemented in 2016. It replaced the Australian Graduate Survey, which comprised Graduate Destinations Survey and Course Experience Questionnaire. It is an online survey capturing short term post-graduation outcomes (approximately six months after completion). The in-scope population consists of all graduates from participating Australian HEIs. In 2020, the response rate was 42.3%, which was 1.9 percentage points lower than the year before.

More information:

- https://www.qilt.edu.au/qilt-surveys/graduate-employment

Student life stages relevant to the outcomes covered: Participation
Outcomes covered:
Initial:

- Increased non-cognitive attributes:
    - Working well in a team,
    - Getting on well with others in the workplace,
    - Working collaboratively with colleagues to complete tasks,
    - Understanding of different points of view,
    - Ability to interact with co-workers from different or multicultural backgrounds
    - Ability to develop innovative ideas
    - Ability to identify new opportunities
    - Ability to adapt knowledge in different contexts
    - Ability to apply skills in different contexts
    - Capacity to work independently)
- Increased academic skills:
    - Oral communication skills
    - Written communication skills
    - Numeracy skills
    - Ability to develop relevant knowledge
    - Ability to develop relevant skills
    - Ability to solve problems
    - Ability to integrate knowledge
    - Ability to think independently about problems,
    - Broad general knowledge

Interim:

QILT Graduate Outcomes Survey (GOS)

- N/A

***Final*:**

- Enrolment in further education
- Characteristics of economic activity, including the type of work (sector, occupation, tasks and duties), number of hours, remuneration, skills (mis)match

Other relevant information covered:

- Age, sex
- Previous university experience
- Socio-economic status, location, Indigenous status, language spoken at home, disability, first in the family (All equity variables are transferred from HEIMS)
- Field of education, mode of study

Existing linkages:

- HEIMS underpins the sample. The survey results can be easily linked to HEIMS data.

Comments/caveats:

- There is potential for selection bias, driven by the opt-in nature of survey completion, which could undermine the reliability of statistical estimates.
- Response rates are relatively low (e.g. 42% in 2020), resulting in a limited coverage of the graduate population.

Table 50. Population Surveys: National Level. Student Outcomes Survey

Student Outcomes Survey (SOS)

Description:
The survey collects information on recent VET students who completed their training in the previous calendar year. It covers topics such as reasons for training, employment outcomes, satisfaction with training, and further study outcomes. The response rate varies between types of students. It ranges from 23.2% among potential subject(s) only completers to 33.8% among qualification completers. Over 266,000 students took part in the survey in the 2020 edition of the study.
The Social Research Centre (SRC) conducts the survey on behalf of The National Centre's for Vocational Education Research (NCVER).

More information:

- https://www.ncver.edu.au/research-and-statistics/publications/all-publications/vet-student-outcomes-2020

Student life stages relevant to the outcomes covered: Pre-Access

Outcomes covered:
Initial:

- N/A

Interim:

- VET courses

Final:

- Labour market outcomes

Other relevant information covered:

- Age, sex
- prior experience and skills
- SEIFA-based measure of socio-economic status
- Indigenous status, NESB status, country of birth, ABS remoteness area, disability status

Existing linkages:

- N/A

Comments/caveats:

-

Population Surveys: State/Territory Level

Table 51. Population Surveys: State/Territory Level. NSW – The Tell Them From Me Student Survey

NSW - The Tell Them From Me Student Survey

Description:
All students in Years 4 to 12 in NSW government schools are encouraged to participate in the study. It is an online survey that takes place during Term 1. An optional second survey takes place in Term 3.

More information:

- https://education.nsw.gov.au/student-wellbeing/tell-them-from-me

Student life stages relevant to the outcomes covered: Pre-Access
Outcomes covered:
Initial:

- Sense of belonging, positive relationships

***Interim*:**

- Educational aspirations: finishing year 12, university, TAFE (secondary students only)
- Interest and motivation;
- Behaviour at school;
- Homework behaviour;
- Valuing school outcomes;
- Perseverance.

***Final*:**

- N/A

Other relevant information covered:

- Age, gender
- Marital status
- Parental education and occupation
- Indigenous status, disability status, RRR status, NESB status.
- Educational attainment, credentials

Existing linkages:

- N/A

Comments/caveats:

- The publicly available information about the study's methodology is limited.

Table 52. Population Surveys: State/Territory Level. QLD – Queensland Engagement and Wellbeing Survey

Queensland Engagement and Wellbeing Survey
Description: All Year 4 to Year 12 students can take part in the study. The survey captures students' wellbeing, engagement and experience at school More information: • https://qed.qld.gov.au/publications/reports/statistics/schooling/students/queensland-engagement-wellbeing-survey/faqs-for-parents-and-carers **Student life stages relevant to the outcomes covered**: Pre-Access **Outcomes covered:** ***Initial:*** • N/A ***Interim*:** • Engagement and experience at school ***Final*:** • N/A **Other relevant information covered:** • N/A **Existing linkages:** • N/A **Comments/caveats:** • The publicly available information about the study's methodology is limited.

Table 53. Population Surveys: State/Territory Level. SA – The Wellbeing and Engagement Collection

SA - The Wellbeing and Engagement Collection (WEC)
Description: The survey focuses on students' wellbeing and engagement. Students in years 4 to 12 are the population in scope. The sample size was over 65,000 (the latest year for which the figure is published on the Department's website). More information: • https://www.education.sa.gov.au/department/research-and-statistics/statistics-and-data/wellbeing-and-engagement-collection-survey/about-wellbeing-and-engagement-collection **Student life stages relevant to the outcomes covered**: Pre-Access **Outcomes covered:** ***Initial:*** • Peer belonging • Perseverance • Academic self-concept • Meeting expectations • Motivation to achieve goals ***Interim*:** • Connectedness to school, • Emotional engagement with teachers • School climate • School belonging ***Final*:** • N/A **Other relevant information covered:** • N/A **Existing linkages:** • N/A **Comments/caveats:** • The publicly available information about the study's methodology is limited.

Table 54. Population Surveys: State/Territory Level. VIC – Student Attitudes to School Survey

VIC - Student Attitudes to School Survey
Description: The survey takes place every year in Term 2. All Year 4 to 12 students are invited to participate. More information: • https://www2.education.vic.gov.au/pal/data-collection-surveys/guidance/attitudes-school-survey **Student life stages relevant to the outcomes covered**: Pre-Access **Outcomes covered:** ***Initial:*** • N/A ***Interim*:** • Student engagement ***Final*:** • N/A **Other relevant information covered:** • N/A **Existing linkages:** • N/A **Comments/caveats:** • The publicly available information about the study's methodology is limited.

Table 55. Population Surveys: State/Territory Level. TAS - Annual Student Wellbeing Survey

TAS - Annual Student Wellbeing Survey

Description:
The survey collects responses from Tasmanian Government school students in Year 4 to 12. In Term 3 2020, almost 24,000 students took part in the survey, meaning that the participation rate was 62%.

More information:

- https://www.education.tas.gov.au/about-us/projects/child-student-wellbeing/student-wellbeing-survey-3

Student life stages relevant to the outcomes covered: Pre-Access

Outcomes covered:
Initial:

- Peer belonging
- Items included in the participating inventory: e.g. Resilience and motivation to achieve goals

***Interim*:**

- Items in the learning inventory - various dimensions of engagement
- School belonging

***Final*:**

- N/A

Other relevant information covered:

- N/A

Existing linkages:

- N/A

Comments/caveats:

- The publicly available information about the study's methodology is limited.

Table 56. Population Surveys: State/Territory Level. NT – Government School Survey

NT - Government School Survey
Description: The survey takes place in Term 3. It collects responses from students in Year 5 to 12. More information: • https://education.nt.gov.au/statistics-research-and-strategies/school-survey **Student life stages relevant to the outcomes covered**: Pre-Access: During School **Outcomes covered:** ***Initial:*** • N/A ***Interim*:** • Student engagement ***Final*:** • N/A **Other relevant information covered:** • N/A **Existing linkages:** • N/A **Comments/caveats:** • The publicly available information about the study's methodology is limited.

Table 57. Population Surveys: State/Territory Level. QLD – Next Step Post-School Destination Surveys

Next Step Post-School Destination Surveys (QLD)
Description: Next Step is an annual survey aiming at collecting information about post-school destinations of Year 12 completers from state, independent and Catholic schools. The information on completers – the survey frame - is provided by the Queensland Curriculum and Assessment Authority. The response rate historically exceeded 80%. More information: • https://alt-qed.qed.qld.gov.au/publications/reports/statistics/schooling/learning-outcomes/next-step **Student life stages relevant to the outcomes covered**: Pre-Access **Outcomes covered:** ***Initial:*** • N/A ***Interim*:** • Educational aspirations • University applications ***Final*:** • Post-secondary education enrolment, including university **Other relevant information covered:** • Labour market status **Existing linkages:** • N/A **Comments/caveats:** • There is a survey of early school leavers that is part of the research project.

Table 58. Population Surveys: State/Territory Level. VIC – On Track Survey

On Track Survey (VIC)
Description: The survey collects data on destinations (post-secondary education, training, and employment) of recent school leavers. They are contacted 6 months after leaving school. The NSW Education Standards Authority provides the sample frame – including records of all Year 12 completers. In 2020, 26,735 Y12 completers (47% of the cohort) took part in the survey. More information: • https://www.education.vic.gov.au/about/research/Pages/ontrack.aspx#link5 **Student life stages relevant to the outcomes covered**: Pre-Access **Outcomes covered:** ***Initial:*** • N/A ***Interim*:** • N/A ***Final*:** • Post-secondary education enrolment, including university **Other relevant information covered:** • Labour market status **Existing linkages:** • N/A **Comments/caveats:** • There is a survey of early school leavers that is part of the research project.

Table 59. Population Surveys: State/Territory Level. NSW – Post-School Destinations and Experiences Survey

NSW Post-School Destinations and Experiences Survey
Description: The survey collects data on destinations (post-secondary education, training, and employment) of recent school leavers. They are contacted between 6 and 12 months after leaving school. The NSW Education Standards Authority provides the sample frame – including records of all Year 12 completers. In 2019, 18,777 school completers took part in the survey (response rate – 47.7%). More information: • https://education.nsw.gov.au/parents-and-carers/pathways-after-school/nsw-post-school-destinations-and-experiences-survey **Student life stages relevant to the outcomes covered**: Pre-Access: During School **Outcomes covered:** ***Initial:*** • N/A ***Interim*:** • N/A ***Final*:** • Post-secondary education enrolment, including university **Other relevant information covered:** • Sex • School sector • Indigenous status • Language spoken at home • Parental education and occupation • Labour market status **Existing linkages:** • N/A **Comments/caveats:** • There is a survey of early school leavers that is part of the research project.

Sample Surveys: National

Table 60. Sample Surveys: National Level. General Social Survey (GSS)

General Social Survey (GSS)
Description: The survey collects data on the well-being and social experiences as well as social characteristics of people living in Australia. Key topics covered in the study include: life satisfaction, personal stressors, social involvement, family and community support, trust, financial stress, and voluntary work. The population in scope includes all usual residents in Australia aged 15 and over. The sample is relatively small, i.e. 3,500 households. More information: • https://www.abs.gov.au/methodologies/general-social-survey-summary-results-australia-methodology/2019 **Student life stages relevant to the outcomes covered**: Pre-Access, Participation **Outcomes covered:** ***Initial:*** • Material situation and standard of living ***Interim*:** • Increased social and cultural capital, community engagement ***Final*:** • Life satisfaction • Health • Personal stressors • Financial stressors • Characteristics of economic activity, including occupation and duties as well as actions taken to find a job **Other relevant information covered:** • Age, sex • marital status • Educational attainment • Country of birth, migration status, language spoken at home • Indigenous status **Existing linkages:** • N/A **Comments/caveats:** • Due to the sample scope and size, it is unlikely that many HEPPP program participants will be captured in the sample.

Table 61. Sample Surveys: National Level. National Health Survey (NHS)

National Health Survey (NHS)

Description:
The survey aims to collect information about the health and well-being of individuals living in Australia.
The entire Australian population in scope. The sample comprises over 20,000 individuals.
 	
More information:
• https://www.abs.gov.au/methodologies/national-health-survey-first-results-methodology/2017-18
Student life stages relevant to the outcomes covered: Participation
 	
Outcomes covered:
Initial:
• N/A
***Interim*:**
• N/A
***Final*:**
• Labour market outcomes:
  ○ employment status
  ○ occupation & sector
  ○ income
• Health
Other relevant information covered:
• Age, sex
• Educational attainment
• Language spoken at home
Existing linkages:
• National Health Survey 2014-15 and 2017-18 editions are available as parts of MADIP
Comments/caveats:
• Due to the sample scope and size, it is unlikely that many HEPPP program participants will be captured in the sample.

Table 62. Sample Surveys: National Level. The Australian Longitudinal Study on Women's Health

The Australian Longitudinal Study on Women's Health (ALSWH)

Description:
The study focuses on Australian women's health, including the condition, health service use, reproductive health, mental health, and factors that might affect health and wellbeing. There are four cohorts of participants numbering between twelve and seventeen thousand individuals. The survey takes place every three years (data on different cohorts are collected in different years).

More information:

- https://alswh.org.au

Student life stages relevant to the outcomes covered: Participation

Outcomes covered:
Initial:

- N/A

***Interim*:**

- N/A

***Final*:**

- Health
- Mental health

Other relevant information covered:

- Age, sex
- Educational attainment
- Command of English
- Being born overseas
- Marital status
- Labour market status
- Place of residence

Existing linkages:

- Data are linked to a number of federal and state data collections comprising health-related information.

Comments/caveats:

- Due to the sample scope and size, it is unlikely that many HEPPP program participants will be captured in the sample.
- Collects data on women only.

Table 63. Sample Surveys: National Level. The Australian Longitudinal Study on Male Health (Ten to Men)

The Australian Longitudinal Study on Male Health (Ten to Men)

Description:
The study focuses on Australian men's health, including the condition, health service use, mental health, and factors that might affect health and wellbeing. There were two waves of the study. Over sixteen thousand individuals took part in the first wave, and nearly twelve thousand did so in the second wave. The first wave took place in 2013-14, the second in 2015-16, and the third in 2020. The data from the last wave are not available yet.

More information:

- https://tentomen.org.au

Student life stages relevant to the outcomes covered: Participation
Outcomes covered:
Initial:

- N/A

***Interim*:**

- N/A

***Final*:**

- Health
- Mental health

Other relevant information covered:

- Age, sex
- Educational attainment
- Command of English
- Country of origin
- Marital status
- Labour market status
- Place of residence

Existing linkages:

- Data are linked to PBS and MBS records.

Comments/caveats:

- Due to the sample scope and size, it is unlikely that many HEPPP program participants will be captured in the sample.
- Collects data on men only.

Table 64. Sample Surveys: National Level. Survey of Education and Work (SEW)/ Labour Force Survey (LFS)

Survey of Education and Work (SEW)/ Labour Force Survey (LFS)
Description: The aim of LFS is to collect information about Australian residents' labour market activity. The scope of the study is the civilian population aged 15 years and over. The SEW is a supplement to the monthly LFS. It collects data on educational participation and attainment of people aged between 15 and 74 years. The sample comprises approximately 26,000 dwellings or 50,000 people (0.32% of the civilian population aged 15 years and over). More information: • https://www.abs.gov.au/methodologies/education-and-work-australia-methodology/may-2020 https://www.abs.gov.au/methodologies/labour-force-australia-methodology/mar-2021 **Student life stages relevant to the outcomes covered**: Participation **Outcomes covered:** ***Initial:*** • N/A ***Interim*:** • N/A ***Final*:** • Further education • Economic activity **Other relevant information covered:** • Age, sex • Marital status • SEIFA-based measure of socio-economic status • Country of birth, year of arrival in Australia **Existing linkages:** • N/A **Comments/caveats:** • Due to the sample scope and size, it is unlikely that many HEPPP program participants will be captured in the sample.

Table 65. Sample Surveys: National Level. Survey of Education and Work (SEW)/ Labour Force Survey (LFS)

Survey of Income and Housing (SIH)

Description:
A household survey collecting information on sources of income, amounts received, housing situation, household and household members characteristics. The population in scope includes residents of private dwellings (around 98% percent of people living in Australia). More than 14,000 households participated in the 2017-18 round. The survey takes place every two years.

More information:
https://www.abs.gov.au/ausstats/abs@.nsf/dossbytitle/F0CDB39ECC092711CA256BD00026C3D5
Student life stages relevant to the outcomes covered: Pre-Access, Participation
Outcomes covered:
Initial:

- N/A

***Interim*:**

- Income, financial situation
- Housing situation

***Final*:**

- Income
- Wealth or net worth

Other relevant information covered:

- Age, sex
- Educational attainment
- Language spoken at home

Existing linkages:

- N/A

Comments/caveats:

- The survey is integrated with the Household Expenditure Survey (HES).

Table 66. Sample Surveys: National Level. The Longitudinal Surveys of Australian Youth

The Longitudinal Surveys of Australian Youth (LSAY)

Description:
LSAY is a large-scale longitudinal survey focused on the progress of young Australians as they move from their mid-teens to their mid-20s. It collects information about education, training, work, financial matters, health as well as social activities. There are six cohorts. Each cohort consists of a sample of Australians aged 15 at the time of the first measurement, the commencing sample size varies between 10,000 and 14,500. The participants are contacted annually until they are 25.

More information:

- https://www.lsay.edu.au

Student life stages relevant to the outcomes covered: Pre-Access, Participation

Outcomes covered:
Initial:

- N/A

***Interim*:**

- Material resources: work, received benefits, financial situation, housing situation
- Non-cognitive attributes measured in the soft-skills section (self-assessed) including items:
    - I am good at coming up with new ideas
    - I have a good imagination
    - I can generally see a way out of problem situations
    - When I make decisions I am happy with them later
    - I have a lot of good ideas
    - I see problems as challenges to overcome
    - I compare the strengths and weaknesses of different ideas
    - I use logic to make my own decisions even if they are different from others
    - I think carefully before reaching conclusions ; as well as teamwork and communication skills

***Final*:**

- Labour market outcomes, including employment status, number of hours worked, type of work, type of business, satisfaction with various aspects of the job
- General health, disability, and physical activity
- Life satisfaction

Other relevant information covered:

- Age, sex

Existing linkages:

- LSAY data are linked to school results (NAPLAN and senior secondary school subject results), VET and higher education data.

Comments/caveats:

- Due to the sample scope and size, it is unlikely that many HEPPP program participants will be captured in the sample.

Table 67. Sample Surveys: National Level. The Longitudinal Study of Australian Children

The Longitudinal Study of Australian Children (LSAC)

Description:
The study tracks the development of two cohorts of children: Cohort B - 5,000 children aged 0-1 years in 2003-04 and Cohort K 5,000 children aged 4-5 years in 2003-04. The information is collected from the children, their parents, carers and teachers. Data from 8 waves are currently available.

More information:

- https://growingupinaustralia.gov.au/about-study

Student life stages relevant to the outcomes covered: Pre-Access
Outcomes covered:
Initial:

- Sense of belonging and general social engagement
- Parental support
- Household finances
- A series of tests and assessments at various ages:
    - The 'who am i?' (WAI) assessment (age: 4-5 years)
    - Peabody picture vocabulary test (PPVT-III) (age: 4-5, 6-7 and 8-9 years)
    - Matrix reasoning (MR) test (age: 6-7, 8-9 and 10-11 years)
    - Executive functioning (EXEC/CogState)
    - Rice test of grammaticality judgement (GJT/SLI)
- Linked AEDC and NAPLAN scores

***Interim*:**

- Learning engagement, truancy
- ATAR
- Y12 subjects and VET courses
- Social capital
- Educational aspirations

***Final*:**

- N/A

Other relevant information covered:

- Age, gender
- Aboriginal/Torres Strait Islander status; English as a second language status; country of birth;
- Medical conditions

Existing linkages:

- The study is linked to multiple administrative datasets, including Medicare, Centreline, AEDC, NAPLAN, MySchool data, ABS Census of Population and Housing.

Comments/caveats:

- Due to the sample scope and size, it is unlikely that many HEPPP program participants will be captured in the sample.
- Partial coverage of some topics over time, e.g. information on Y12 is available only in newer waves and childhood data are available in older waves only.

Table 68. Sample Surveys: National Level. Footprints in Time – The Longitudinal Study of Indigenous Children

Footprints in Time - The Longitudinal Study of Indigenous Children (LSIC)

Description:
The study tracks the development of two cohorts of children: Cohort B - 5,000 children aged 0-1 years in 2003-04 and Cohort K 5,000 children aged 4-5 years in 2003-04. The information is collected from the children, their parents, carers and teachers. Data from 8 waves are currently available.

More information:

- https://www.dss.gov.au/about-the-department/publications-articles/research-publications/longitudinal-data-initiatives/footprints-in-time-the-longitudinal-study-of-indigenous-children-lsic#13 ;
- Department of Social Services, 2021, "Footprints in Time: The Longitudinal Study of Indigenous Children, Release 11 (Waves 1-11)", doi:10.26193/ICEBFP, ADA Dataverse, V4

Student life stages relevant to the outcomes covered: Pre-Access

Outcomes covered:
Initial:

- Sense of belonging
- Parental support
- Household finances
- Linked NAPLAN results and direct assessments of child development

***Interim*:**

- Educational and occupational aspirations
- Learning engagement, truancy
- School enrolment
- Social capital

***Final*:**

- N/A

Other relevant information covered:

- Age, gender
- Geographic variables, including SEIFA
- Indigenous status

Existing linkages:

- AEDC, NAPLAN and My School data have been linked to the survey results.

Comments/caveats:

- Due to the sample scope and size, it is unlikely that many HEPPP program participants will be captured in the sample.

Table 69. Sample Surveys: National Level. Household, Income and Labour Dynamics in Australia Survey

Household, Income and Labour Dynamics in Australia (HILDA) Survey

Description:
HILDA is a household-based panel study following the lives of more than 17,000 Australians each year. It collects information about labour well-being, labour market activity, and family life. The study commenced in 2001, and there have been 18 waves so far.

More information:

- https://melbourneinstitute.unimelb.edu.au/hilda/for-data-users ; https://www.online.fbe.unimelb.edu.au/HILDAodd/srchSubjectAreas.aspx

Student life stages relevant to the outcomes covered: Pre-Access, Participation
Outcomes covered:
Initial:

- N/A

***Interim*:**

- Truancy, disciplinary sanctions (selected waves only)
- Records on education (enrolment, qualifications) collected in each wave
- Records of credentials/qualifications collected in each wave

***Final*:**

- Records of credentials/qualifications collected in each wave
- Enrolment in master's and doctoral programmes
- Labour market outcomes, including:
    - Employment status
    - Number of hours worked
    - Type of work, type of business
    - Satisfaction with various aspects of the job
- General health, disability, and physical activity
- Life satisfaction

Other relevant information covered:

- Age, gender
- Marital status
- Parental education and occupation
- Indigenous status, disability status, RRR status, NESB status
- Educational attainment, credentials

Existing linkages:

- **N/A**

Comments/caveats:

- Due to the sample scope and size, it is unlikely that many HEPPP program participants will be captured in the sample.

Table 70. Sample Surveys: National Level. Apprentice and Trainee Experience Destination Survey

Apprentice and Trainee Experience and Destination Survey
Description: The survey collects information on apprentices and trainees who either completed or cancelled or withdrew from an apprenticeship or traineeship. Topics covered by the survey include reasons for training, employment outcomes, reasons for non-completion, satisfaction with the apprenticeship or traineeship, and further study outcomes. The survey has been conducted three times, in 2008, 2010, and 2018. In 2019, nearly 30% of apprentices and trainees were invited to participate in the survey. The response rate was around 30% resulting in over 11,000 individuals taking part in the survey. More information: • https://www.ncver.edu.au/research-and-statistics/collections/apprentice-and-trainee-experience-and-destinations **Student life stages relevant to the outcomes covered**: Pre-Access **Outcomes covered:** ***Initial:*** • N/A ***Interim*:** • Apprenticeships and training ***Final*:** • Labour market outcomes • Further education **Other relevant information covered:** • Age, sex • prior experience and skills • Indigenous status, NESB status, country of birth, ABS remoteness area, disability status **Existing linkages:** • N/A **Comments/caveats:** • Due to the sample scope and size, it is unlikely that many HEPPP program participants will be captured in the sample.

Table 71. Sample Surveys: National Level. Life Patterns

Life Patterns

Description:
The study follows the lives of young people after they left secondary education. Members of Cohort 1 were aged 18 in 1991, and members of Cohort 2 were aged 17 in 2005. In 2021, a new group of seventeen years olds will form Cohort 3. The initial sample in 1991 comprised nearly thirty thousand individuals from Victoria but was later reduced to 2000 respondents. Cohort 2 was twice as numerous and more geographically diverse. It included respondents from Victoria, New South Wales, Tasmania, and the Australian Capital Territory. The survey covers topics such as life experiences, work, study, and plans for the future.

More information:

- https://education.unimelb.edu.au/life-patterns

Student life stages relevant to the outcomes covered: Pre-Access, Participation
Outcomes covered:
Initial:

- Educational aspirations

***Interim*:**

- N/A

***Final*:**

- Records of credentials/qualifications.
- Labour market outcomes
- Life satisfaction

Other relevant information covered:

- Age, gender
- Marital status
- Educational attainment, credentials

Existing linkages:

- N/A

Comments/caveats:

- Due to the sample scope and size, it is unlikely that many HEPPP program participants will be in the sample.
- Data collected for Cohort 3 will be most relevant, but the study has not commenced yet.
- Description of covered outcomes is based on information for older cohorts.

Table 72. Sample Surveys: National Level. Mission Australia Youth Survey

Mission Australia Youth Survey

Description:
The Mission Australia Youth Survey is an annual cross-sectional survey of young Australians aged 15 to 19 years. It regularly collects information on education and employment, community activities, wellbeing, values and feelings about the future. Moreover, each year respondents are asked questions aiming at exploring further particular issues. For example, in 2020, the additional topics included experiences of unfair treatment or financial difficulties. It is a large-scale survey. In 2020, nearly 26,000 young Australians participated.

More information:

- https://www.missionaustralia.com.au/publications/youth-survey

Student life stages relevant to the outcomes covered: Pre-Access, Participation

Outcomes covered:
Initial:

- Educational aspirations

***Interim*:**

- N/A

***Final*:**

- Enrolment in higher education

Other relevant information covered:

- Age, gender
- Indigenous status
- Migrant status and cultural background other than English
- Disability
- Labour market status

Existing linkages:

- N/A

Comments/caveats:

- Due to the sample scope and size, it is unlikely that many HEPPP program participants will be captured in the sample.
- Data collected for Cohort 3 will be most relevant, but the study has not commenced yet.
- Description of covered outcomes is based on information for older cohorts.

Table 73. Sample Surveys: National Level. WPLS

WPLS component of the Post Schools Destinations Survey (Planned)
Description: WPLS would be included in the proposed new Post-School Destination Survey (PSDS). The survey will track young people starting from their final school years and into further education and work. WPLS will focus on higher education participation of students from currently underrepresented groups. The data will be collected in eleven waves starting with Year 10 class of 2022. The initial sample is expected to comprise around 11,000 students from around 600 schools. **Student life stages relevant to the outcomes covered**: Pre-Access, Participation **Outcomes covered:** ***Initial:*** • Educational aspirations • Knowledge of available support ***Interim*:** • Senior subjects • Y12 certificates • NAPLAN results - Assessment of reading, writing, spelling, grammar and punctuation, and numeracy skills of students in Year 3, 5, 7 and 9 • Accessing available services • Financial situation ***Final*:** • Enrolment in higher education • Degree completion • Labour market outcomes **Other relevant information covered:** • Interventions in which students participated • Background characteristics including equity group membership, parental education and occupation • School characteristics **Existing linkages:** • Survey results will be linked to the Australian Early Development Census (AEDC), National Assessment Program data (especially NAPLAN results), and higher education enrolment data. **Comments/caveats:** • The study has yet to commence.

Sample Surveys: State-based

Table 74. Sample Surveys: State-based. WA – Speaking Out Survey

WA - Speaking Out Survey
Description: The Speaking Out Survey inaugurated in 2019. The next edition is scheduled for 2021. In 2019, a representative sample of Year 4 to 12 students was invited to share their experiences and views on, among others, safety, mental health, and engagement in education. Nearly 5,000 students took part in the survey. More information: https://www.ccyp.wa.gov.au/our-work/projects/speaking-out-survey **Student life stages relevant to the outcomes covered**: Pre-Access **Outcomes covered:** ***Initial:*** • sense of belonging and connection to the community • material resources ***Interim*:** • Engagement in school and learning ***Final*:** • N/A **Other relevant information covered:** • N/A **Existing linkages:** • N/A **Comments/caveats:** • The publicly available information about the study's methodology is limited.

Table 75. Sample Surveys: State-based. WA – Speaking Out Survey

The Australian Temperament Project (ATP)
Description: The study followed for over three decades parents (Generation 1) and their offspring (Generation 2) to collect data on social and emotional development. The addition of Generation 3, children of Generation 2 born after 2011, will provide an opportunity to link data across three generations. Initially, the sample comprised nearly two and half thousand families from Victoria. There have been fifteen waves of the study. More information: https://www.melbournechildrens.com/atp **Student life stages relevant to the outcomes covered**: Pre-Access **Outcomes covered:** ***Initial:*** • Family support • Non-cognitive attributes ***Interim*:** • N/A ***Final*:** • Mental health • Health **Other relevant information covered:** • Age, sex • Locality • Ethnicity • Financial situation **Existing linkages:** • N/A **Comments/caveats:** • The age of participants limits the usefulness of the data. Generation 2, born in the early 1980's, is too older than a typical student, and data collection ceased in 2010. Generation 3, offspring of Generation 2, is younger than most of the participants of the HEPPP funded activities. • Study is limited to Victoria.

References

ACIL Allen Consulting. (2017). *Evaluation of The Higher Education Participation and Partnerships Program*. Melbourne.

Aitken, L. (2013). *U@ uni summer school program: Implementing summer schools as a successful school outreach strategy*. Sydney, Australia.

Austin, P. C. (2011). An introduction to propensity score methods for reducing the effects of confounding in observational studies *Multivariate Behavioral Research*, *46*(3), 399-424. https://doi.org/10.1080/00273171.2011.568786

Australian Government. (2009). *Transforming Australia's Higher Education system*. E. a. W. R. Department of Education, Canberra.

Public Governance, Performance and Accountability Act 2013, (2013). https://www.legislation.gov.au/Details/C2013A00123

Australian Institute of Health and Welfare. (2014). *Towards a performance measurement framework for equity in higher education*. Canberra.

Baum, F., Lawless, A., Delany, T., Macdougall, C., Williams, C., Broderick, D., Wildgoose, D., Harris, E., Mcdermott, D., Kickbusch, I., Popay, J., & Marmot, M. (2014). Evaluation of health in all policies: Concept, theory and application. *Health Promotion International*, *29*(suppl_1), i130-i142. https://doi.org/10.1093/heapro/dau032

Behrendt, L., Larkin, S., Griew, R., & Kelly, P. (2012). *Review of Higher Education access and outcomes for Aboriginal and Torres Strait Islander People: Final report*

Bennett, A., Naylor, R., Mellor, K., Brett, M., Gore, J., Harvey, A., James, R., Munn, B., Smith, M., & Whitty, G. (2015). *The Critical Interventions Framework Part 2: Equity initiatives in Australian Higher Education: A review of evidence of impact*. Newcastle. https://www.newcastle.edu.au/__data/assets/pdf_file/0016/261124/REPORT-FINAL.pdf

Better Evaluation. (2016). *Realist Evaluation*. https://www.betterevaluation.org/en/approach/realist_evaluation

Bradley, D., Noonan, P., Nugent, H., & Scales, B. (2008). *Review of Australian Higher Education: Final report* (9780642778048). E. a. W. R. Department of Education, ,, Canberra.

Brett, M. (2018). *Equity performance and accountability*. National Centre for Student Equity in Higher Education, Curtin University, Perth.

Burke, P. J., Bunn, M., Lumb, M., Parker, J., Mellor, K., Brown, A., Locke, W., Shaw, J., Webb, S., & Howley, P. (unpublished). *International review of literature on equity in Higher Education: Dismantling deficit in equity structures by drawing on a multidimensional framework.* [A research report prepared for the Australian Government Department of Education Skills and Employment National Priority Pool Program.]. The University of Newcastle.

Centre for the Study of Higher Education. (2010). *Group of Eight: Framework for Evaluation of Equity Initiatives*. Melbourne. https://files.eric.ed.gov/fulltext/ED539403.pdf

Chesters, J., Rutter, K., Nelson, K., & Watson, L. (2018). Alternative Pathways into university: Are Tertiary Preparation Programs a viable option? *Australian Universities' Review*, *60*(1), 35-44.

Chesters, J., & Watson, L. (2016). Staying power: The effect of pathway into university on student achievement and attrition. *Australian Journal of Adult Learning*, *56*(2), 225–249. https://doi.org/10.3316/informit.198197359499070

Christensen, L., & Evamy, S. (2011). MAPs to Success: Improving the first year experience of alternative entry mature age students. *The International Journal of the First Year in Higher Education*, *2*(2), 35-48. https://doi.org/10.5204/intjfyhe.v2i2.83

Coryn, C. L. S., Noakes, L. A., Westine, C. D., & Schro¨ter, D. C. (2010). A systematic review of theory-driven evaluation practice from 1990 to 2009. *The American Journal of Evaluation*, *32*, 199-226. https://doi.org/10.1177/1098214010389321

Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). Developing and evaluating complex interventions: the new Medical Research Council guidance. *BMJ*, *337*, 1-6. https://doi.org/https://doi.org/10.1136/bmj.a1655

Curtis, D. D., Drummond, A., Halsey, J., & Lawson, M. J. (2012). *Peer-mentoring of students in rural and low-socioeconomic status schools: Increasing aspirations for Higher Education*. Adelaide, South Australia.

Davies, R., & Dart, J. (2005). *The most significant change technique: a guide to its use*. CARE International, United Kingdom.

de Vries, J. C. (2018). *University student equity initiatives: An examination of the efficacy of programs and practices to inform best practice* Curtin University, Perth.

Deaton, A., & Cartwright, N. (2018). Understanding and misunderstanding randomized controlled trials. *Social Science & Medicine*, *210*, 2-21. https://doi.org/10.1016/j.socscimed.2017.12.005

DESE. (2020a). *Higher Education Statistics: 2019 Section 11 Equity groups*. https://www.dese.gov.au/higher-education-statistics/resources/2019-section-11-equity-groups

DESE. (2020b). *Higher Education Statistics: Student Data*. Retrieved 1 August 2021 from https://www.dese.gov.au/higher-education-statistics/student-data

DESE. (2020c). *Job-ready graduates: Higher Education Reform Package 2020*. Canberra.

DESE. (2021). *Higher Education Participation and Partnerships Program (HEPPP)*. Retrieved 9 August 2021 from https://www.dese.gov.au/heppp

Diamond, M. R., & O'Brien-Malone, A. (2018). Pathways to performance: An examination of entry pathway and first-year university results. *Asia Pacific Journal of Education*, *38*(1), 110-128. https://doi.org/http://dx.doi.org/10.1080/02188791.2018.1423953

Downing, L. (2017). *The emerging equity evaluation landscape in higher education* (Vol. 17). SAGE Publications. https://doi.org/10.3316/ielapa.651667981009884

Early Childhood Education and Care. (2018). *Results based accountability* The State of Queensland (Department of Education). https://earlychildhood.qld.gov.au/funding-and-support/grants-tenders-and-funding/early-years-services-funding/results-based-accountability

Edwards, D. (2011). *Student demand: Trends, key markets and the movement towards demand-driven enrolment*. Australian Council for Educational Research. https://doi.org/10.3316/informit.396215631250096

Edwards, D., & McMillan, J. (2015). *Completing university in a growing sector: Is equity an issue?* Informit. https://doi.org/10.3316/apo.57017

Fraser Health. (2014). Differentiation of research, quality improvement and program evaluation. https://www.fraserhealth.ca/-/media/Project/FraserHealth/FraserHealth/Health-Professionals/Research-and-Evaluation-Services/20171010_research_QI_program_evaluation_differentiation.pdf?la=en&rev=a785dee5cb274506b379e70f9b11a902&hash=8D5AC84ABA8875B3620F84C688C8F24F94C7F685

Friedman, M. (2009). *Trying hard is not good enough: How to produce measurable improvements for customers and communities*.

Harvey, A., Edwards, D., Luckman, M., & McMillan, J. (2021). *Supporting development of the Widening Participation Longitudinal Survey: A literature review and typology*. Centre for Higher Education Equity and Diversity Research, La Trobe University, Melbourne.

Hatry, H. P. (2013). Sorting the relationships among performance measurement, program evaluation, and performance management. In S. B. Nielsen & D. E. K. Hunter (Eds.), *Performance management and evaluation: New directions for evaluation* (pp. 19-32). Wiley Online Library. https://doi.org/10.1002/ev.20043

Higher Education Access Tracker. (2021). *HEAT: Higher Education Access Tracker*. https://heat.ac.uk/

HM Treasury. (2020a). *Magenta Book Annex A: Analytical methods for use within an evaluation*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/879418/Magenta_Book_Annex_A._Analytical_methods_for_use_within_an_evaluation.pdf

HM Treasury. (2020b). *Magenta Book: Central Government guidance on evaluation*. www.gov.uk/official-documents

Hunter, D. E. K., & Nielsen, S. B. (2013). Performance management and evaluation: Exploring complementarities. *New Directions for Evaluation*, *137*, 7-17.

Koshy, P. (2019). *Equity student participation in Australian higher education 2013-2018*. National Centre for Student Equity in Higher Education, Curtin University, Perth. https://data.informit.org/doi/10.3316/apo.272141

Koshy, P., & Seymour, R. (2015). *Student equity performance in Australian Higher Education: 2007 to 2014*. National Centre for Student Equity in Higher Education,. https://doi.org/10.3316/apo.57419

KPMG. (2015). *Evaluation of Bridges to Higher Education: Final report*. Prepared for the Bridges to Higher Education Managerment Committee. https://www.uws.edu.au/__data/assets/pdf_file/0007/898504/04302015Bridges_to_Higher_Education_Final_Report.pdf

Kubler, M., Tomaszewski, W., Western, M., Johnstone, M., & Xiang, N. (2020). *Young Achievers Program - future directions*. The Institute for Social Science Research, The University of Queensland.

Lamb, S., Jackson, J., Walstab, A., & Huo, S. (2015). *Educational opportunity in Australia 2015: Who succeeds and who misses out*. Centre for International Research on Education Systems, Melbourne, Victoria University.

Li, I. W., & Dockery, A. M. (2014). *Socio-economic status of schools and university academic performance: implications for Australia's higher education expansion*. The National Centre for Student Equity in Higher Education, Curtin University, Perth.

Mansournia, M. A., & Altman, D. G. (2016). Inverse probability weighting. *BMJ*, *352*, 189. https://doi.org/10.1136/bmj.i189

Martin, L. (1994). *Equity and general performance indicators in Higher Education*. Australian Government Publishing Service, Canberra, Australia.

Mayne, J. (2008). *Contribution analysis: An approach to exploring cause and effect* [ILAC Brief]. Institutional Learning and Change.

Mohammed, E. Y., & Bladon, A. J. (2017). *Theory-based impact evaluation: Better evidence in action*. The International Institute for Environment and Development, London. https://pubs.iied.org/17404iied

Murphy, M., Edwards, B., Edwards, D., Phillips, B., Myers, P., & Norton, A. (2021). *Sampling strategy paper: Post school Destinations Survey & Widening Participation Longitudinal Study*. A report from the Widening Participation Longitudinal Study (WPLS): 2020 Scoping and Implementation Study.

National Centre for Student Equity in Higher Education. (2020). *National Centre for Student Equity in Higher Education Briefing Notes*. https://www.ncsehe.edu.au/research/briefing-notes/

Naylor, R. (2015). *Understanding evaluation for equity programs: A guide to effective program evaluation.* . National Centre for Student Equity in Higher Education (NCSEHE), Curtin University, Perth.

Naylor, R., Baik, C., & James, R. (2013). *A Critical Interventions Framework for advancing equity in Australian higher education*. Centre for the Study of Higher Education, The University of Melbourne.

Norton, A., & Edwards, B. (2021). *National data sources for the Widening Participation Longitudinal Survey*. A report from the Widening Participation Longitudinal Study (WPLS): 2020 Scoping and Implementation Study.

OECD. (2010). *Glossary of key terms in evaluation and results based management*. Paris, France. http://www.oecd.org/development/peer-reviews/2754804.pdf

Pawson, R., Greenhalgh, T., Harvey, G., & Walshe, K. (2005). Realist review: A new method of systematic review designed for complex policy interventions. *Journal of Health Services Research & Policy*, *10*, 21-34. https://doi.org/10.1258/1355819054308530

Perrin, B. (2012). *Linking monitoring and evaluation to impact evaluation* [Impact Evaluation Notes]2). The Rockefeller Foundation.

Petticrew, M., Rehfuess, E., Noyes, J., Higgins, J. P. T., Mayhew, A., Pantoja, T., Shemilt, I., & Sowden, A. (2013). Synthesizing evidence on complex interventions: how meta-analytical, qualitative, and mixed-method approaches can contribute. *Journal of Clinical Epidemiology*, *66*(11), 1230-1243. https://doi.org/https://doi.org/10.1016/j.jclinepi.2013.06.005.

Pilkington, K., & Lock, G. (2012). Education Direct: An Alternative Entry Pathway to pre-service teacher education. *Australian Journal of Teacher Education*, *37*(8), 1-15.

Pitman, T., & Koshy, P. (2015). *A Framework for measuring equity performance in Australian Higher Education: Draft framework document V1.6*. National Centre for Student Equity in Higher Education, Curtin University, Perth. https://www.ncsehe.edu.au/wp-content/uploads/2016/07/EPF_Framework_Final.pdf

Pitman, T., Trinidad, S., Devlin, M., Harvey, A., Brett, M., & McKay, J. (2016). *Pathways to higher education: the efficacy of enabling and sub-bachelor pathways for disadvantaged students* (Report for the Australian Government

Department of Education and Training, Issue. Curtin University, Perth. https://data.informit.org/doi/10.3316/apo.65879

Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., Britten, N., Roen, K., & Duffy, S. (2006). *Guidance on the conduct of narrative synthesis in systematic reviews* A Product from the ESRC Methods Programme.

Productivity Commission. (2019). *The demand driven university system: A mixed report card* (Commission Research Paper, Issue. the Productivity Commission, Canberra, Australia.

Productivity Commission. (2020). *Indigenous evaluation strategy*. The Productivity Commission, Canberra, Australia. https://www.pc.gov.au/inquiries/completed/indigenous-evaluation/strategy/indigenous-evaluation-strategy.pdf

Queensland Treasury. (2020). *Queensland Government program evaluation guidelines*. Queensland Government.

Rabe-Hesketh, S., & Skrondal, A. (2012). *Multilevel and Longitudinal Modeling Using Stata* (3rd ed.). Stata Press Publication.

Rogers, P. J. (2012). *Introduction to impact evaluation* (Impact Evaluation Notes, Issue 1). InterAction and The Rockefeller Foundation.

Sawhill, I. V., Winship, S., & Grannis, K. S. (2013). Pathways to the middle class: Balancing personal and public responsibilities. *Issues in Science and Technology*, *29*(2), 47-54.

Shand, D. (1998). Evaluation capacity and the public sector. Public Sector-The Critical Role of Evaluation. World Bank Seminar Washington: The World Bank,

Skivington, K., Matthews, L., Simpson, S. A., Craig, P., Baird, J., Blazeby, J. M., Boyd, K. A., Craig, N., French, D. P., McIntosh, E., Petticrew, M., Rycroft-Malone, J., White, M., & Moore, L. (2021). Framework for the development and evaluation of complex interventions: Gap analysis, workshop and consultation-informed update. *Health Technology Assessment*, *25*(57). https://doi.org/10.3310/hta25570

Smith, J., Pollard, K., Robertson, K., & Shalley, F. (2018). *Strengthening evaluation in Indigenous Higher Education contexts in Australia* [2017 Equity Fellowship Report]. National Centre for Student Equity in Higher Education, Curtin University, Perth.

Stern, E. (2015). *Impact evaluation: A guide for commissioners and managers*. Bond, London, UK.

Stirling, J., & Rossetto, C. (2015). "Are we there yet?": Making sense of transition in higher education. *Student Success*, *6*(2), 9-20. https://doi.org/http://dx.doi.org/10.5204/ssj.v6i2.293

Thalluri, J. (2016). Bridging the gap to first year health science: Early engagement enhances student satisfaction and success. *Student Success*, *7*(1), 37-48. https://doi.org/http://dx.doi.org/10.5204/ssj.v7i1.305

The Auditor-General. (1997). *Program evaluation in the Australian Public Service*. Australian National Audit Office, Canberra, Australia. https://www.anao.gov.au/sites/default/files/anao_report_1997-98_03.pdf

Thomas, J., & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. https://doi.org/10.1186/1471-2288-8-45. *BMC Medical Research Methodology*, *8*(45), 10. https://doi.org/10.1186/1471-2288-8-45

Thomas, K., Ellis, B., Kirkham, R., & Parry, L. (2014). Remote Indigenous students: Raising their aspirations and awareness of tertiary pathways. *Australian and International Journal of Rural Education*, *24*(2), 23-35.

Tomaszewski, W., Kubler, M., Perales, F., Clague, D., Xiang, N., & Johnstone, M. (2020). *Investigating the effects of cumulative factors of disadvantage*. Report for the Australian Department of Education, Skills and Employment prepared by The Institute for Social Science Research, The University of Queensland.

Tomaszewski, W., Kubler, M., Perales, F., Western, M., Rampino, T., & Xiang, N. (2018). *Review of identified equity groups*. Report for the Australian Department of Education and Training prepared by The Institute for Social Science Research, The University of Queensland.

Treasury Board of Canada Secretariat. (2021). *Theory-based approaches to evaluation: Concepts and practices*. Government of Canada.

Vernon, L., Watson, S. J., Moore, W., & Seddon, S. (2019). University enabling programs while still at school: Supporting the transition of low-SES students from high school to university. *Australian Educational Researcher*, *46*(3), 489-509. https://doi.org/http://dx.doi.org/10.1007/s13384-018-0288-5

Vernon, L. A., Watson, S., & Taggart, A. (2017). *University aspirational pathways for metropolitan and regional students : Implications for supporting school-university outreach partnerships* (Vol. 28). Society for the Provision of Education in Rural Australia. https://doi.org/10.3316/aeipt.220251

Westhorp, G. (2014). *Realist impact evaluation: An introduction*. The Methods Lab. https://cdn.odi.org/media/documents/9138.pdf

White, H. (2009). Theory-based impact evaluation: principles and practice. *Journal of Development Effectiveness*, *1*(3). https://doi.org/10.1080/19439340903114628

Wilkins, P., & de Vries, J. C. (2014). *Monitoring and evaluation of Higher Education equity initiatives*. National Centre for Student Equity in Higher Education, Curtin University, Perth.

Wong, S., Press, F., & Cumming, T. (2015). *Report on the pilot evaluation of the National Community Hubs Program* Scanlon Foundation / Refuge of Hope, Melbourne. <http://www.communityhubs.org.au/wp-content/uploads/2017/10/NCHP_Pilot_Outcomes_Evaluation_Report_17_Dec_15.pdf>

Zacharias, N. (2017). *The Australian student equity program and institutional change. Paradigm shift or business as usual?* National Centre for Student Equity in Higher Education, Curtin University, Perth.

Zacharias, N., Mitchell, G., Raciti, M., Koshy, P., Li, I., Costello, C., & Trinidad, S. (2018). *Widening regional and remote participation: Interrogating the impact of outreach programs across Queensland*. National Centre for Student Equity in Higher Education, Curtin University, Perth. https://www.ncsehe.edu.au/wp-content/uploads/2018/11/RegionalRemoteParticipation_SueTrinidad_Accessible.

CRICOS Provider 00025B

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

Institute for Social Science Research

The University of Queensland
Long Pocket Precinct
Level 2, Cycad Building (1018)
80 Meiers Road, Indooroopilly 4068,
Queensland, Australia

+61 7 3346 7471
issr.research@uq.edu.au | issr.uq.edu.au