National Regional, Rural and Remote Education Strategy

Submission form

Welcome to the submission process for the National Regional, Rural and Remote Education Strategy (the Strategy).

The Regional Education Expert Advisory Group invites all interested parties to put forward ideas on the framing paper released on 20 December 2018.

The Advisory Group is seeking action-orientated responses to the challenges and key questions identified in this paper. The paper outlines the background of the strategy formation, the problem facing regional, rural and remote education and the challenges faced by those communities.

Your responses to the Framing Paper should focus on practical steps the Government could take to improve tertiary education access and attainment for people from regional, rural and remote backgrounds.

The form can be submitted any time before public submissions close at **5:00pm (AEDT)** on **1 February 2019**.

Please note that the fields in the form are text only and pictures cannot be included. To return your completed form or if you experience difficulties in completing the form, please contact the Strategy Secretariat at RegionalStrategy@education.gov.au.

Note:

- information provided through the submission process may be published with your permission, including in the documentation relating to the Strategy and on the department's website
- questions marked with a * require an answer to be provided.

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I agree to have my submission published.*

Yes ☒

No ☐

Your details

Title*	Mr
First name*	Peter
Last name*	Derbyshire
E-mail address*	██████████████
State/Territory*	ACT

Would you like to receive updates about the Strategy's process? *

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Submission details

I am making this submission as a: *

Educator	☐
parent/carer/guardian	☐
Student / potential student	☐
School	☐
University	☐
Training Provider	☐
Employer	☐
community organisation	☐
government agency	☐
peak body / Think Tank	☒
academic person	☐
Other	☐

Are you submitting on behalf of an organisation (including a business, other body or agency)? *

Yes ☒
No ☐

Please specify the organisation on whose behalf you are submitting

Science & Technology Australia

I confirm that I have the organisation's agreement to make this submission. *

Yes ☒
No ☐

Note: If you do not have the organisation's agreement, please go to the previous question and select "No" to confirm you are not submitting on behalf of an organisation.

Key Questions from the Framing Paper

The Regional Education Expert Advisory Group is seeking responses to the following key questions. Specifically, we are looking for practical steps to overcome the five challenges facing students from RRR backgrounds.

Challenge A: There are fewer study options available in RRR areas

1. What opportunities exist to expand options for further study in RRR areas?
2. What potential is there for universities, vocational training providers and other service providers to better work together in RRR areas, including opportunities to expand service offerings and better support articulation between VET and higher education?

Challenge B: Relocating RRR students face significant financial, emotional and social challenges

3. What financial supports work best for students from RRR backgrounds, including those who choose to relocate?
4. What forms of support might be useful in helping students from RRR backgrounds to continue with their tertiary study?
5. How can universities assist RRR students to feel like they belong on their campus?

Challenge C: Raising aspirations for tertiary education

6. What actions would help to raise aspirations and support informed career choices for students from RRR backgrounds?

Challenge D: RRR often experience multiple forms of disadvantage

7. What practical steps can be taken to support RRR students who experience multiple forms of disadvantage?
8. How can we better support Indigenous people from RRR areas to access and succeed in tertiary education?

Challenge E: Attracting people and jobs to RRR areas

9. How can tertiary education providers further stimulate economic growth in RRR areas?
10. What actions would further strengthen and increase the attractiveness of regional universities?
11. What policies would attract more metropolitan and international students to study at RRR areas, including regional universities and campuses?

Challenge F: Implementing and monitoring a national strategy

12. Would there be value in establishing a National Regional Education Commissioner to oversee the Strategy and, if so, what should their role be?
13. How should success be measured? What goals and targets, including for tertiary education attainment, should be considered both at a national and individual community level?

Please use the space provided below to respond to the questions above

The table cell will expand to accommodate your response. Please limit your response to 3000 words.

Introduction

Strong science, technology, engineering and mathematics (STEM) education plays a crucial role in Australia's capacity to build a strong, healthy future. In a recent submission to the Status of the Teaching Profession[1], STA outlined a number of challenges and potential improvements for Australian education – with a particular focus on students living and studying outside capital cities[2]. We encourage the Regional Education Expert Advisory Group to engage with this related inquiry, and the issues raised within it.

The STEM workforce is a key focus for Science & Technology Australia, but the skills delivered through quality maths and science education are applicable much more broadly than the STEM sector. With innovations in science and technology across every sector – in agriculture, communications, environmental management, mining, health, finance, economics, manufacturing and more – the provision of a strong STEM education to all students is fundamental to the prosperity of all Australians, and will create opportunities for innovation, healthcare, and sustainable economic development in regional, rural and remote Australia.

Challenge A: There are fewer study options available in RRR areas

What opportunities exist to expand options for further study in RRR areas?

In the 2018-19 Federal Budget, funding was announced for regional study hubs to provide tertiary students with improved resources to facilitate participation in online higher education[3]. STA considers this a good first step towards improving STEM education opportunities for regional students and believes it could form the foundation for a strong suite of resources and opportunities to empower students learning by distance.

An important component of any STEM qualification is the practical, hands-on experience that builds on theoretical concepts. While there are technologies that allow for distance learning and remote practical experience in fields such as programming, engineering or data analysis, there are many fields that cannot be reproduced virtually and are impractical to transport to RRR areas.

For example, the study of biology and anatomy is significantly enhanced when students are given the opportunity to dissect and examine biological specimens. While it may not possible in regional hubs to practice on real specimens, new technologies such as 3D printing can provide regional education centres with the capacity to create their own true-to-life models for dissection. Likewise, virtual reality technology and 360° conferencing could provide valuable opportunities to remote

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[1] "Status of the teaching profession" Parliament of Australia, Accessed January 2019

[2] "Status of the teaching profession" Science & Technology Australia, 2018

[3] "Regional Study Hubs" Department of Education and Training, Access January 2019

students through virtual campus classes and even virtual field trips through technology like Google Expedition for field-based sciences. Together new and emerging technologies can be used to develop hands-on experiments and activities for all fields of science and maths.

Recommendation: Supply and encourage the use of new and emerging technologies to provide regional, rural and remote students with better hands-on education resources

What potential is there for universities, vocational training providers and other service providers to better support articulation between VET and higher education?

While most universities in Australia have one or more regional campuses, the VET sector has a much higher saturation in the RRR communities when compared to universities[4]. In the past, universities have established partnerships with regional VET providers to deliver tertiary courses, but there has been little in the way of Federal support for these programs.

There is great potential for a Federal program that provides investment to support universities to work with local VET providers, with the aim of delivering tertiary courses in subjects such as science, engineering, and mathematics. This program should consider the resources required to employ and train appropriate teaching staff, as well as the cost of supporting VET providers to provide bachelor level courses.

While STA recognises some STEM courses may not be deliverable through this sort of arrangement, it would nonetheless provide important and hitherto inaccessible pathways for regional, rural and remote students to develop deeper STEM skills.

Such partnerships would be further strengthened by including local businesses and industries. Along with partnerships between VET providers and universities, partnerships with businesses would allow for better integration between tertiary educators and RRR communities.

A review into tertiary education highlighted the importance and value of work integrated learning in tertiary education[5]. By incentivising partnerships with local businesses in areas relevant to students like agriculture, mining, and healthcare, RRR students will develop skills that are relevant, in-demand and lead to local employment. Incentives and support programs for students undertaking work integrated learning, like the APR internships, should be a focus to enable this to happen most effectively and efficiently.

Recommendation: Incentivise partnerships between universities, local VET providers and local businesses.

Challenge C: Raising aspirations for tertiary education

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[4] "Rural and Regional Access to Secondary and Tertiary Education Opportunities" TAFE Directors Australia

[5] "Review of Australia's Research Training System" Australian Council of Learned Academies, 2016

What actions would help to raise aspirations and support informed career choices for students from RRR backgrounds?

According to the Australian Mathematical Science Institute around one in four Australian students in Years 7 to 10 is taught by an out-of-field teacher at least once during secondary school[6]. While these teachers are trained educators, a lack of confidence or gaps in knowledge have been shown to have a negative effect on the student's engagement in the subject[7]. To address this nationwide, Australia must provide professional development to existing science and maths teachers who are teaching out-of-field and must incentivise teaching students and STEM graduates to complete qualifications to become a teacher in STEM.

STA has made recommendations to the Status of the Teaching Profession Inquiry outlining potential solutions to the issue of out-of-field teaching but would also like to emphasise that for RRR teachers, the ability to undertake professional development is especially important. For RRR teachers, these opportunities may be more difficult to deliver or access. We strongly support giving them the same opportunities as their colleagues in metropolitan areas.

The second obstacle to entry to tertiary STEM education is the provision of limited career advice during secondary education. Career advice is too focused on linking a future degree to a linear pathway into a selected career, and often the full breadth of potential applications of skills in STEM are not given the airing they deserve. STA supports equipping career advisors to advise students on the wide range of potential careers that can come from the study of STEM.

Recommendation: Provide professional development opportunities for regional teachers who are teaching out-of-field in maths and science, and incentives for graduates of education and STEM degrees to become specialised science or maths teachers;

Recommendation: Provide better resources and training for career advisors to support them to fully explain and encourage the benefits of STEM degrees and the growth in industry sectors that require STEM training.

Challenge D: RRR often experience multiple forms of disadvantage

What practical steps can be taken to support RRR students who experience multiple forms of disadvantage?

Students that come from rural, regional and remote areas face disadvantage, and this can be exacerbated by being part of other minorities – such as being a woman, a member of the LGBTQI community, or from a culturally or linguistically diverse background. Unlike other students, they are less likely to have localised support networks when is comes to managing these forms of disadvantage. As a result, they feel more isolated and likely to suffer more mental illness than their metropolitan counterparts[8].

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[6] "Crunching the numbers on out of field teaching", Australian Mathematical Sciences Institute

[7] "Out-of-field teaching in Australian Secondary School" Australian Council for Educational Research, 2016

[8] "Health and wellbeing in students with very high psychological distress from a regional Australian university" Mulder. A. & Cashin, A. Advances in Mental Health, 2015

There are two practical steps that can be taken to ensure diverse students from RRR areas are provided with the support needed to manage these forms of disadvantage. The first step is to provide more funding to universities in an effort to bolster mental health services on campus. Universities recognise the important role of mental health support for their students, however being able to provide independent and accessible counselling for students, and in particular students facing multiple forms of disadvantage, is a challenge.

The second practical step is to return funding to student organisations on campus. Providing financial support to student organisations empowers them to create programs and initiatives that lead to grassroots action to address inequity. These clubs, societies, and equity groups provide all students that experience disadvantage, including RRR students, a greater sense of belonging and a wider support network[9]. While residential colleges for RRR students provide some opportunities for students to develop social networks, there are risks involved with relying on residential colleges due to the reports of sexual assault and hazing associated with some colleges[10].

Recommendation: Ensure more of the Student Services and Amenities Fee is provided to student organisations.

How can we better support Indigenous people from RRR areas to access and succeed in tertiary education?

Indigenous students continue to be one of the most underrepresented groups in tertiary education. There are multiple barriers to Indigenous participation, and while they have been recognised, overcoming these barriers is continuing to be a challenge. The cultural and racial barriers that exist in universities can often lead to very low participation rates and must be addressed if participation is to improve.

One of the key initiatives to help Aboriginal and Torres Strait Islanders students to succeed at universities has been the Indigenous Education Centres. These Centres are imperative, as they provide students with both educational and cultural support specific to the issues faced by Indigenous students. Despite their importance, one of the key funding pathways - the Indigenous Student Success Program (ISSP) - has faced cuts and efficiency dividends since the 2015-16 Federal Budget[11]. While a small reinvestment has recently been made, this has not reversed the impact of these cuts.

As a result, remote Aboriginal and Torres Strait Islander students do not receive hard copy material, and without access to the internet, are left without any support. Meanwhile, students on campus are experiencing reduced tutorial assistance, which is also having negative effects.

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[9] "Student voice key to unlocking inclusive educational practices" Gordon. M. Canadian Journal for New Scholars in Education, 2010

[10] "The red zone report: An investigation into sexual violence and hazing in Australian university residential colleges" End Rape on Campus Australia, 2018

[11] "Budget Analysis 2017-18 Indigenous Student Success Program" National Tertiary Education Union, 2017

Recommendation: Return funding to the Indigenous Student Success Program and ensure the continuation of Indigenous Education Centres

Challenge E: Attracting people and jobs to RRR areas

Regional universities are a key source of both local investment and local employment for RRR communities. Regional hubs themselves are important, but without ongoing stable investment in these institutions, potential flow on benefits for local communities are limited.

One example of this is investment in research infrastructure. Through the now defunct Education Investment Fund, regional universities and universities with regional campuses were able to fund infrastructure projects that attracted ongoing investment in the region as well as providing jobs in construction, manufacture and specialist operations.

Universities are more likely to invest in large infrastructure projects with government support. With sound, strategic and long-term co-investment, not only will regional campuses attract local RRR students, they will also be better placed to attract students from metropolitan areas and internationally, which will achieve valuable economic flow on effects for the broader community in which they reside.

It's also to important to note that, according to the 2010 Australian Regional Higher Education Report:

> Those who study at regional Higher Education Institutions (HEIs) feel that their studies prepare them for employment better than those who study at metropolitan HEIs and are more likely to feel that their employability and skills are excellent.

> Within six months of completing their courses, those who study at regional HEIs are somewhat more likely than those from metropolitan HEIs to have obtained a permanent or open-ended contract and to be in full-time employment.

> Five years after completing their courses, the majority of those who were enrolled at regional HEIs and are working are still living in regional areas, with just over one-third having moved to metropolitan areas.[12]

This provides an insight into the value of strong Higher Education Institutions, and their role in bolstering RRR communities and in achieving better retention of RRR graduates in the local workforce. With more STEM graduates in local communities, the more adaptive and better future-proofed our regional, rural and remote communities will be.

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[12] "Australian Regional Higher Education Report" Australian Council of Education Research 2010

Recommendation: Provide mechanisms for government co-investment in regional research infrastructure

Please provide a short summary of the key points in your submission

Please limit your response to 300 words— **note:** any text above 300 words will be excluded from your submission. The table cell will expand to accommodate your response.

A key policy focus for STA is improving the level of STEM skill throughout the Australian workforce. It is estimated that Australia is creating STEM jobs at 1.5 times the rate of non-STEM jobs. However, the proportion of STEM qualified workers is only increasing by 15%/year compared to non-STEM workers at 5%/year[13]. This is a national priority that presents a significant opportunity for regional, rural and remote communities to rise to the challenge of training and supporting the STEM-skilled workforce Australia needs, both to make up this shortfall and to thrive into the future.

STA supports the development of a National Regional, Rural and Remote Education Strategy to address the unique challenges of delivering high quality education to students outside of major cities, and we are heartened by the appointment of a National Regional Education Commissioner to oversee the implementation of this Strategy.

In this submission, STA recommends:

1. Use new technologies to provide regional, rural and remote students with better hands-on education resources;
2. Incentivise partnerships between universities, local VET providers and local businesses;
3. Provide professional development opportunities for regional teachers who are teaching out-of-field in maths and science, and incentives for graduates of education and STEM degrees to become specialised science or maths teachers;
4. Ensure the Student Services and Amenities Fee is used by student organisations;
5. Return funding to the Indigenous Student Success Program and ensure the continuation of Indigenous Education Centres;
6. Provide better resources and training for career advisors to support them to fully explain and encourage the benefits of STEM degrees; and
7. Provide mechanisms for government co-investment in regional research infrastructure

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[13] "Perspectives on Education and Training: Australians with qualification in science, technology, engineering and Maths" Bureau of Statistics, 2015
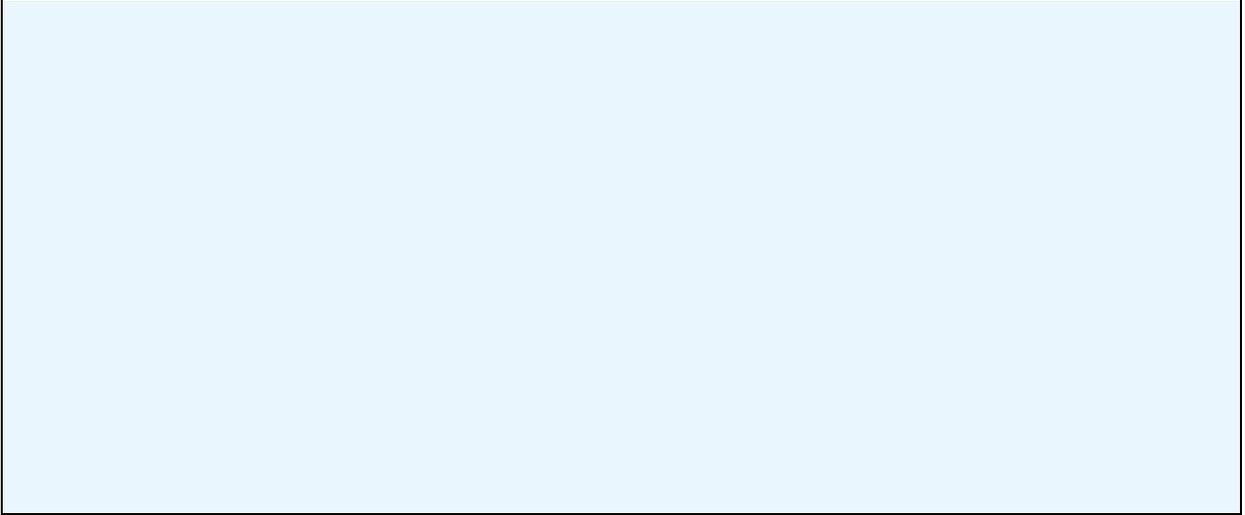
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