

Developing Research-Industry Links

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Screen production is a complex, inter-disciplinary and group-based activity. Because of its complexity most undergraduate students engage with the straightforward version of the production process – namely the making of short productions. Most postgraduate researchers simply extend the short production form to longer forms such as feature films and documentaries, which are the most frequent form of industry output.

From the point of view of future planning there are two problems with this conventional postgraduate research path:

- (i) It is politically unrealistic and economically unsustainable to expect all screen production postgraduate researchers to produce expensive feature length “masterpieces” in a country that has a small and marginal film industry.¹ It is likely that only exceptional candidates will be able to work in this market-driven format.
- (ii) In a world that is ever more reliant on image communication the domain of screen production is ever expanding and changing. These changes should be reflected in any postgraduate program.

Accordingly, to formulate a successful and sustainable postgraduate program in screen production it is recommended that all universities consider splitting their postgraduate programs into two programs:

- (1) Industry Program: This program should account for exceptional filmmakers working in the existing industry paradigm. It should seek constructive links with industry at postgraduate and postdoctoral levels. This program should be organized around Professional Doctorate programs with a substantial coursework component. Professional Doctorates in screen production are not common in Australia at the moment, although one respondent in the SPARC Survey indicated that such a program does exist in at least one Australian university. AFTRS would be another natural candidate for developing such a program.
- (2) Innovation Program: This program should explore new paradigms of production. It should seek to establish cutting-edge industry beyond the existing industry model.

These two strands of scholarship are depicted schematically in Figure 1.

In functional terms the links between the university researchers and the screen industry can be tested by the following two questions:

- What can the university researchers do for the screen industry?
- What can the screen industry do for the university researchers?

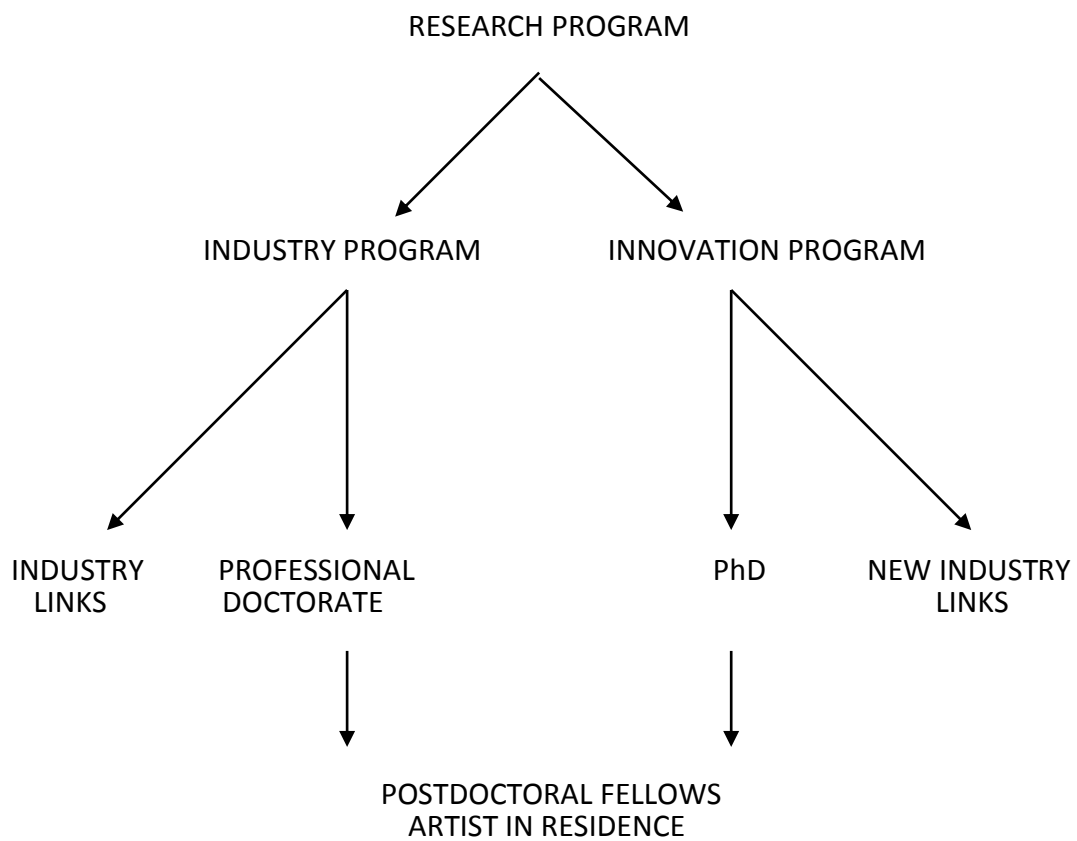


Figure 1 Recommended pathways for postgraduate and postdoctoral development in screen production

Whenever possible, the two strands of research should engage one another as the Figure 2 sketch indicates.

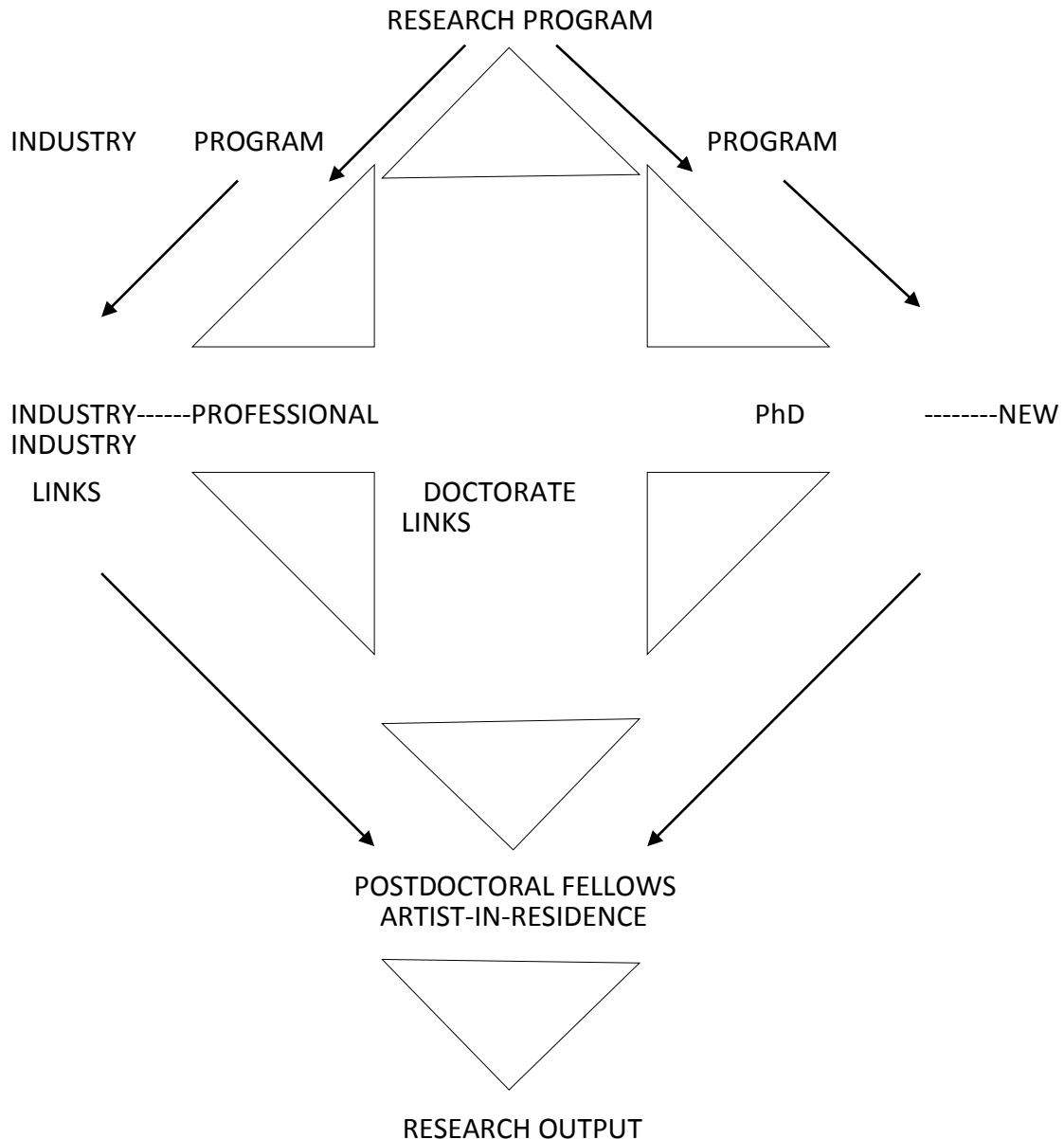


Figure 2 Potential synergies of the proposed dual pathway postgraduate scheme

Strategies of Linking Academia with Industry

From the point of view of the university researchers, the links between academia and the screen industry are quite straightforward. Many academic staff members have industry experience and many industry members frequently teach at universities on part-time basis.

The same cannot be said about the industry funding organizations, as outlined in the following letter to the Minister for the Arts. In the late 2011, the National Cultural Policy Discussion Paper was launched by the Honorable Minister for the Arts, Mr

Simon Crean, MP, and responses were invited from interested parties. The project leader prepared a submission on behalf of the project group. This submission is included below.

National Cultural Policy Discussion Paper (Detail)

TO: The Honorable Minister for the Arts, Mr Simon Crean, MP
RE: National Cultural Policy Discussion Paper: University–Industry Links

Date: October 2011

The Honorable Minister,

We, the undersigned are members of the ALTC-funded Innovation and Development project entitled *Developing A Collaborative National Postgraduate Research Education Program for 22 Australian Films Schools*.

Collectively, we welcome the four national cultural policy goals identified by the National Cultural Policy Discussion Paper – diversity, innovation and participation, excellence and socio-economic goals.

We are now writing to you to draw your attention to:

- (i) the importance of the emerging university creative arts research sector in attaining these goals;
- (ii) and to underline the need for the establishment of strong research links between the creative industries and the university creative arts research sector.

A range of federal government policies already endorses this type of university–industry–research linkage including the Australian Research Council (ARC) Linkage Grant Scheme and the Cooperative Research Centres (CRC) Program administered by the Department of Innovation, Industry, Science and Research (DIISR).

While the principle of university–industry research links is welcomed by most, in practice this is not always acted on in the creative arts – most probably because practice-based research in creative arts is a comparatively recent development and its importance is yet to be recognized fully by a range of cultural organizations and policy makers.

We specifically wish to draw your attention to the policies of the existing federal and state screen funding organizations, which do not endorse or encourage university–industry research linkage. For historical reasons these organizations have grown distant from the university research sector and this distance is maintained today by what we consider to be outdated and inappropriate funding policies that are counterproductive to all. For example, postgraduate practice-based researchers are excluded from accessing production funding through government film financing organizations as a matter of policy. This is in stark contrast to other industries that do recognize the importance of succession planning and that do support the new generation of postgraduates. Without such succession planning and rejuvenation there is a great risk of ossification and decline in the effectiveness of these screen funding organizations and in the industry as a whole. Accordingly, we consider it in the national interest that the funding anomaly, which excludes postgraduate researchers from accessing screen industry funds, be corrected. We recommend that this be done with a clear policy directive from the Minister to the screen funding

organizations.

If the funding policies of these organizations were changed and realigned with the funding policies of other comparable industries we are confident that this would give a major impetus to the four cultural policies goals mentioned in your National Cultural Policy Discussion Paper while unleashing the research potential of 22 Australian film schools. The likely outcome of such funding realignment will be a flow of innovation from the university sector to the industry that may well lead to a new kind of renaissance in the screen and related industries. Failure to do this will have consequences that are equally dramatic, in our opinion, as Australia will have two areas of major cultural investment, namely the university research sector and the screen funding sector, which are effectively working against one another. This will greatly harm our international competitiveness in what is arguably a vital area of economic and cultural development.

The nature of the problem as we see it is set out in the attached document. Should you have any questions on this matter our team would be more than happy to assist in any way we can.

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CREATIVE ARTS RESEARCH: UNIVERSITY–INDUSTRY LINKS

Most research-based industries in Australia have direct and constructive links with the university research sector. Researchers move easily between universities and industry in both directions, in science, medicine, engineering, law, economics just to name a few. Most industries welcome value added R&D contribution from the university sector and are happy to fully or partly fund this partnership. Similarly, the Federal government wants the university researchers to link with industry and to add value to it through their research projects. The Australian Research Council (ARC) Linkage Grant Scheme and the Cooperative Research Centres (CRC) Program administered by the Department of Innovation, Industry, Science and Research (DIISR) were created for this reason. Both schemes are sensitive to the sustainable and renewable needs of research and usually encourage grant applications that include postdoctoral fellowships, postgraduate researchers and early career researchers.

Historical Anomaly: In contrast to most other complex industries the film industry did not start with any direct links with the university research sector. This is because there was no tertiary film training or research in Australia until 1969. As a consequence a different R&D arrangement arose following the emergence of the 1970s Australian New Wave film industry. At that time screen researchers consisted of heroic individuals associated with public and private organizations such as Film Australia, the Australian Film Commission, Australian Broadcasting Corporation, AFTRS, along with a range of state-based public and private organization including ScreenWest, Film Victoria, South Australian Film Corporation and FTO. Many of these organizations funded and managed a range of developmental, experimental, and innovative schemes.

Emerging Potential: During this time the university sector provided mostly undergraduate training. Master of Arts was the high-end qualification for creative artists in general. However in the last three decades the situation has changed

greatly following a rapid growth of students attending the university-based screen production programs. The 2011 AFTRS Corporate Plan describes it well:

Communications and media courses are high demand courses in the tertiary sector. In 2008 the sector (including both public and private higher education providers) offered 1055 qualifications that specialised, or offered a major study component in communications and/or creative arts. Of these 1055 qualifications, 537 are undergraduate qualifications and 518 are postgraduate qualifications. These numbers illustrate the strength of demand for education and training in screen and related creative industries.¹

In addition to AFTRS there are now over 20 university-based films schools that cater for these students in Australia and each year this number keeps growing by popular demand.² The most exciting element of this development is that the best students are now going on to do honours and higher research degree programs including PhDs. These are practice-based research programs that give rise to creative works as their principal outcome. As a result some of the best filmmakers from the industry can now be found in the university sector as teaching staff and many are themselves undertaking higher research degrees. So much so that the division between creative filmmakers and researchers has mostly disappeared within the university sector. Creative works are now recognized as research and a publication category by the Australian Research Council (since 2000) and are audited as such by the Excellence of Research in Australia (ERA) scheme.

Paradigm Shift: This practice-based research has now replaced the haphazard process that awaited filmmakers when there were no university research programs, and when, after graduation, filmmakers were required to starve or mortgage their houses. This type of spontaneous creative development can still take place outside tertiary institutions but it is becoming less frequent and is found mostly in places where the concentration of the industry is large enough to support it with an equivalent research programs. Large corporations and organizations such as Hollywood studios and the BBC are practice-based universities in their own right – as are Google and Microsoft. These organizations are able to support their own creative practitioners right up to the cutting-edge of the industry development and each year we marvel at the new inventions they bring to us. The internal research structures of these corporations could well be conceptualised as top end practice-based research centres that go beyond PhD, and postdoctoral development.

Unaided research development cannot take place in countries such as Australia with its small film industry – or medical industry for that matter. In general terms, small industries can only support small innovations when such projects are expensive to carry out. However, university-based research programs are an efficient way of dealing with this problem. Research programs identify graduate candidates with greatest potential and support their development often with postgraduate scholarships. This process has served Australia well in advanced fields such as medicine and many areas of science and there is no reason to doubt that it would work for a sophisticated field such as the film industry. For all these reasons practice-based research in creative arts is arguably one of the most innovative, relevant and influential research methodologies available to a small nation such as Australia.

The New Order: It is no longer wise to return to the heroic “starving artist” with Master of Arts scenario. The economic potential of the new media products and the competition that this potential inspires has created a global industry that requires an ever-higher level of knowledge, research and technological sophistication. Within this perspective we take it as self-evident that to train a successful screen industry professional requires continual training and support from undergraduate training to postgraduate research and then to post-doctoral practice. In the future, we expect that the best and most innovative practitioners will be found in the postgraduate

and the post-doctoral sections of academia – as is the case with other complex industries. The successful Pixar company provides a good case in point. It grew from a collection of researchers with PhD qualifications. Dick Shoup, the inventor of the SuperPaint program had a PhD in Computer Science from Carnegie Mellon, Alvi Ray Smith was a mathematician who wrote his PhD thesis on *automata* theory, Ed Catmull had a PhD in Physics. Jon McCormack is a good example of such creative intelligence in Australia.³ While these are all examples of technical intervention in the art of filmmaking the same logic holds for all disciplines that go into the production of image-based texts.

Practice-based research outputs from 22 Australian film schools dovetails neatly into the four “goals” identified in the National Cultural Policy Discussion Paper, namely a diversity goal, an innovation and participation goal, an excellence goal and socio-economic goal. It should be noted that in the most recent Excellence of Research in Australia (ERA) audit almost every Australian university-based film school that was audited was rated at the world standard or above.

If harnessed properly these film schools represent an enormous reservoir of creative capability. The screen industry can benefit greatly from the value-added potential that exists in these schools. Linking university researchers with industry practice and industry funding is essential for the university sector as well, because practice-based research, like science research, is generally resource intensive and expensive. Ideally one would want there to be an unimpeded university–industry R&D exchange similar to exchange that exists in other complex industries today and as is encouraged by the existing federal policies.

Exclusion: In these circumstances it is surprising to find little if any linkage between the university research sector and the screen industry. This is mostly because the film funding bodies act as funding gatekeepers for industry projects and instead of facilitating links with the university R&D sector, they make it a point of principle to exclude the university sector from the industry. For example, postgraduate candidates are not eligible to apply for any production funds related to their research projects (as indicated earlier). The funding bodies do this because they consider their own funds to be “non-educational” and reject the idea that anyone from a tertiary institution should have access to these “non-educational” funds. They consider this to be an example of the inappropriate “double dipping” into non-educational funds by educational institutions – an institutional taboo – even when the students in question are research students. Paradoxically the same organizations are more than happy to collaborate with print-based researchers and it seems that to them the notion of research excludes practice-based research.

This funding exclusion invokes an archaic period when:

- Filmmaking was something undertaken only after university studies and when the division between education and practical filmmaking was indeed real and self-evident.
- University students, if they did any filmmaking, were trained (at an undergraduate level) and did not participate in value-added research.
- Research was thought to be based on a written analysis and thesis only.
- The art of filmmaking and academia were considered antithetical.
- The high-end degree for a creative artist was Master of Arts.
- All universities were fully funded government organizations.
- Students did not pay any tuition fees

None of these reasons are valid today.

We now have a situation in which high quality and innovative creative practices, emerging naturally from the university sector, are being excluded from industry funds by the policies of the film funding bodies simply because these projects have arisen from the university sector. In many instances the funding bodies tell postgraduates that their projects have merit and will be funded as long as they renounce their links with the university.

From a national interest point of view this is clearly a situation in which everyone misses out. The industry misses out on potential value-added research from 22 film schools. The researcher in the film schools will miss out even more since they do not have access to industry funds. This is not without consequences. At the present, the project support available to a postgraduate for the duration of his or her candidature are very modest and are usually of the order of \$2500. In contrast, potential funds offered to “emerging filmmakers” from state and federal funding bodies could be as much as \$150,000.⁴ Thus, at the completion of an honours program, the best of the new generation of screen production students have an unenviable choice of either going on to do a PhD with minimal support or to abandon their studies and be potentially funded by as much as \$150,000.

The Problem: How can one explain the behavior of the funding organizations? Why did they not recognize the changing landscape of film production and the role that the university research sector can contribute to it? We consider that the problem has arisen primarily because of the ambiguous policies that underpin the funding organizations, which simultaneously are required to be cultural organizations as well as industry organizations. As cultural organizations they seek out the most vibrant, innovative and relevant aspects of the culture. This is essentially an innovative research selection process not all that different from that undertaken by the Australian Research Council in conventional research development. However, as industry-focused organizations these funding bodies also need to optimize the direct and indirect commercialization of the productions they fund.

While these two policy aims are admirable, they tend to work against one another and combining them within each funding organization can have most unfortunate consequences, which serve neither policy aim and potentially undercuts both. At present it is possible for the funding organizations to justify subsidizing poor commercial productions on cultural grounds, while innovative cultural projects can be rejected on perceived commercial grounds. In the worse case scenario this sliding culture–commerce criteria can give rise to works that are commercially unsuccessful and work that is, in most respects, dull and mediocre.

Long-term Recommendation: We are of the firm opinion that the cultural brief for the creative arts funding organization should be based on the cutting-edge cultural research and innovation. The Australian Research Council provides a good model for how such projects can be selected for funding – the selection should be based on research excellence in the first instance and unimpeded by other considerations except for the judgment of peers and the research priorities set by the government. Similarly we are of the opinion that commercialization of the cultural IP should rest on its own self-evident successes or failures. If these contradictory functions were separated, innovation would be liberated and the commercialization of projects would be self-evident. Accordingly, we recommend that, as a long-term aim, government should separate the research/innovation and commercialization components of its creative arts funding agencies and film funding organizations in particular.

Short-term Recommendation: Our position is predicated on a strongly-held conviction that linking creative researchers from the university sector and the screen industry will increase the quality and the volume of creative output in Australia. We are happy for these assertions to be tested gradually, over time and on the basis of

evidence. Accordingly we recommend that realignment of funding bodies should be gradual and evolutionary.

During the interim period we recommend that all barriers to university–industry research links be removed. We suggest that this be done by a policy directive to funding organizations, as this is probably the most efficient way of inculcating a new institutional mindset. Ideally such a policy directive should have succession planning and the university–industry research linkage as a pre-condition for all project funding, as this is in the long-term national interest. It is also a convention already encouraged by the existing federal linkage policies.

Dr Josko Petkovic, October 2011

On behalf of *Developing A Collaborative National Postgraduate Research Education Program for 22 Australian Films Schools* project team, October 2011

Notes and References

1. AFTRS, AFTRS Corporate Plan 2010-2011 for the Planning Period 2008-2011, AFTRS, 2010, p. 8.
2. University film schools include the following universities: Bond, COFA, CSU, Curtin, Deakin, ECU, Flinders, Griffith, Macquarie, Murdoch, UoN, Notre Dame, UWA, QUT, RMIT, Swinburne, UC, UniSA, UTS, UWS, VCA, in addition to AFTRS.
3. The Abstract of Jon McCormack's thesis *The Application of L-systems and Developmental Models to Computer Art, Animation and Music Synthesis* is informative in this regard:
<www.csse.monash.edu.au/~jonmc/research/thesis.html>, accessed 13 Sept. 2013.
4. For example see Screen Australia's Talent Escalator Program: Short Programs "Springboard : Short Film Initiative":
<www.screenaustralia.gov.au/industry_support/Development/TalEsc_springboard.asp>, accessed 13 Sept. 2013. Also see FTI HyperLink:
<www.fti.asn.au/make/fund/hyperlink>, accessed 13 Sept. 2013.

