



Industry Engagement and Graduate Skills

*A Report on Tertiary Courses in Interactive
Media and Computer Games*

August 2012

ISIS Project Partners



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This Report - *Industry Engagement and Graduate Skills: A Report on Tertiary Courses in Interactive Media and Computer Games* - was prepared by Ms Leonie Kirchmajer and Emeritus Professor Sue Rowley.

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1 Report Summary

The Interactive Skills Integration Scheme (ISIS), funded by the Commonwealth Workforce Innovation Program and the Victorian Government, is a two-year industry development project targeting the computer games and interactive media industry. Commencing in 2010, the ISIS project responded proactively to industry and government concerns that educational courses were not adequately equipping graduates for future employment opportunities and industry needs.¹

The Interactive Skills Integration Scheme (ISIS) focused workforce skills and business sustainability with the aim of improved preparation for professional practice in undergraduate education programs, leading to 'work-ready' graduates in interactive media, and improved management/business model skills of leading industry practitioners. ISIS aimed to identify and pilot interventions to:

- improve the education of graduates to better equip them for careers in this industry;
- develop more sustainable career pathways for existing games and interactive media practitioners;
- pilot interactive media applications, services and technologies in cross-sector markets; and
- improve the upper management skills of industry organisations.

ISIS proposed to develop, trial and showcase strategies to extend applications of interactive media beyond the games sector to the broader interactive media and other industries. ISIS sought to address unmet workforce and skills demands of the Australian games industry that will allow it to take full advantage of new market opportunities created through a broader application of interactive media to other industry and public sectors.

Recent studies, including *Working in Australia's Digital Games Industry Consolidation Report*² by Dr Sandra Haukka in May 2011 and NCVER's Monograph Series 6/2011³, have presented an industry perspective on interactive media and gaming education and training. Haukka concludes that 'Australia's games industry continues to experience serious skills issues'. In polls taken for this study, 83% of respondents believed that skills shortages existed and 84% indicated that games courses in Australia were highly ineffective' (pp. 47, 52-53). Issues identified by industry respondents included:

- insufficient/ineffective linkages between industry and providers;
- rapid pace of change means workers need access to ongoing education and training;
- mismatch of graduate skills and industry needs;
- lack of local experience and skills resulting in expensive and time-consuming overseas recruitment;
- critical importance of certain non-technical skills;
- teachers with insufficient industry experience; and
- shortages of structured on-the-job training opportunities.

NCVER research drew similar conclusions, with industry respondents believing that 'a large proportion [of many games-specific courses at VET and university levels] are simply rebadged programming or arts courses with a couple of games units added. Their graduates 'are unlikely to be employed by games companies because, as a games company manager said, "they get taught the wrong tools, the wrong techniques, and don't understand how the games industry works".'

¹ for more information, see: <http://www.isisinteractive.net.au/>

² Haukka, S, 2011, *Australia's Digital Games Industry Consolidation Report*, <http://www.cci.edu.au/content/gisp>

³ National Centre for Vocational Education Research (NCVER) 2011, *VET and the diffusion and implementation of innovation in the mining, solar energy and computer games sectors*, NCVER monograph series 06/2011 <http://www.ncver.edu.au/publications/2392.html>

The NCVET report also noted that '[some] registered training organisations and universities provide dedicated games courses in close cooperation with industry, which means that their graduates have skills in using the relevant current tools and technologies, and thus find it easier to get jobs'.

This ISIS review of tertiary education courses in games and interactive media sought to elicit 'the other side' views and experience of educators and providers. The study is an extensive review of tertiary educational and training offerings in computer games and interactive media throughout Australia. Information on Vocational Education and Training (VET) diploma courses and University undergraduate courses and curricula was obtained from surveys of course providers (lecturers, teachers and administrators).

In the light of expressed industry concern about lack of consultation between course providers and industry, a key focus of this ISIS study was consultation and industry input into courses. Additionally, the IBSA 2009 *Review of the Digital Games Development Game Art, Animation and Programming* indicated that the industry itself is often not aware of what education and training is available, finding that "[t]here was low awareness of the range of national courses and competencies available in their region."

This study, too, finds gaps in communication between industry, the profession and educators. Thus, an immediate challenge for both educators and industry leaders is to develop effective voices for teachers, students, graduates, employers and employees in the Australian interactive media and games industry. Greater communication between educators and industry would increase both industry awareness of the education and training currently available and educator awareness of the skills and knowledge required by industry.

The study showed significant variability in the frequency and methods used by course providers to engage with industry as part of the curriculum review and development process. If providers are not engaging with the industry frequently or are only consulting a very narrow portion of the industry, then they risk not keeping up to date with industry requirements. The ISIS study has revealed a significant increase in the number of these courses on offer. The situation could emerge in which there is both an excess of graduates and a skills shortage.

Initially, a comprehensive list of all courses offered by universities, TAFE and other VET providers was compiled from information provided online. Using this database, key personnel (such as Deans, Heads of School, course coordinators and administrators) were identified and contacted. In three stages, they were invited to complete surveys that covered basic course information, articulation between VET and university courses, career and employment preparation, course reviews and industry consultation.

This ISIS Report presents the findings of the research undertaken and outlines the current state of the interactive media and gaming education in Australia. Recommendations are made for curriculum development, improving industry engagement and input, and further investigation.

Course statistics: courses, student enrolments and graduates

In 2010, a web-based search revealed that there are 166 courses in interactive media and related areas offered by 56 course providers⁴. More than half of these courses are undergraduate Bachelor degree courses offered by Universities. These courses include both specialist courses in computer games and broader courses in Computer Science/Information Technology and Creative Arts/Industries that include a major or specialisation in computer games, interactive media or related areas. The majority of course offerings are generalist Creative Industries/Arts programs. The majority of courses are concentrated in Victoria, Queensland and NSW.

⁴ Based on the ISIS review of courses offered in 2010.

The first survey was sent to all identified providers in March-May 2011: a total of 56 surveys were sent out; 17 were completed and returned to ISIS, representing a response rate of 30.1%. The information provided by these 17 respondents covered 56 courses (representing 33.7% of total courses).

Since 2005, the number of students enrolled in these courses has more than doubled (increase of 108%) from 2157 enrolments in 2005 to 4479 enrolments in 2010. Whilst university enrolments increased by 61% from 2092 to 3375, the steep rise is explained by the entry of the VET sector providers into this market. VET enrolments increased from just 65 in 2005 to 1104 in 2010, an increase of 1598%.

The number of courses on offer has almost tripled - an increase of 186% since 2005. This growth in courses is a key factor in the growth of overall enrolments, especially considering that individual course enrolments appear to be fairly stable⁵. There has been a corresponding increase in the number of graduates, although many of the new courses have yet to produce their first graduates. If the trend of increased enrolments and completions continues, there may be approximately 4700 graduates from these courses over the next 1-3 years⁶.

The growth in course offerings appears to be based on prospective student demand for courses and may not reflect industry demand for graduates. Considering the size of the Australian games and interactive media industry sector, proliferation of courses and increased enrolments may result in more graduates seeking employment than the industry can absorb.

Articulation and advanced standing between VET and Higher Education courses

There has been a significant growth over the five-year period 2005-2010 in the number of VET courses offered by TAFEs and Private Providers. The second survey sought information on student movement between the VET and Higher Education sector and articulation arrangements between VET providers and universities. In general, this information appears not to be collected at institutional levels by providers so the survey sought information from course conveners, who would have been responsible for recommending admission and any credit transfer or advanced standing, and admissions administrators. The relatively low response rate means that inferences drawn from the responses should be treated as indicative.

The research investigated formal and informal pathways of articulation or credit transfer between providers and found little evidence of any significant levels of student movement between providers. VET graduates were admitted to university courses in just under a half (48%) of the courses covered by survey responses, suggesting a willingness to accept VET qualifications by universities and offer credit transfer or advanced standing on a case-by-case basis. But, in these courses, VET graduates represent less than 10% of the student intake. Very few students in 2010 received any advanced standing or credit towards their course from prior study, and those who did only received a small amount of credit.

Where movement does occur, students are more likely to move from VET to Higher Education than the other way around. Only a few students appear to enter VET courses having already completed a higher education course. Thus, at present, there appears to be little incentive for providers to create and promote advanced standing or articulation options for these courses.

The third survey was administered concurrently with the second survey (two instruments were used because, in many institutions, advanced standing and articulation is handled by centrally-located admissions administration section whereas course design and student experience is handled by faculty-based academic staff). Surveys were sent to 186 course coordinators (or equivalent) resulting in 64 responses, a return rate of 34.4%.

⁵ Enrolment figures based on the data received from providers via ISIS Survey 1

⁶ Based on a completion rate of 42% calculated on the data received from providers via ISIS Survey 1 and applied to the known and extrapolated (based on average) enrolments for 2008-2010.

Curriculum structure and design

Several key features of the curriculum design of these courses were examined, including the mode of course delivery, the proportion of the course dedicated to specific interactive media and/or gaming content, and the way professional learning is embedded into the course.

These courses are predominantly full-time courses, with over 80% being offered on either an exclusively full-time or mostly full-time basis. While this may not be a significant issue for students undertaking their first qualification after high school, it does make it difficult for students already in the workforce to undertake courses to extend or specialise their existing skills and improve employment prospects.

The survey asked respondents about the proportion of specific interactive media and/or gaming content in the courses. In just over half the courses, course content specifically on interactive media or gaming amounted under 50% of the total content. Specialist courses were more likely to have a higher proportion of specific interactive media and/or gaming content. However, overall, the course type – being a specialist course or a more generalist course with a major – is not an indicator of the amount of specific interactive media and/or gaming content in a course. Even those courses that are Nationally Recognised Training (NRT) programs were highly variable when it came to specific interactive media and/or gaming content. Notably, the Diplomas of Interactive Digital Media, which were the only specialist NRT program included, ranged widely from 11% to 90% of specific interactive media and/or gaming content. It should be noted that new NRT programs have since been developed with a more focused curriculum that should address some of the issues of high variance in the previous program.

Thus, the proportion of interactive media and/or gaming content within courses varies but the course descriptors (name, type of course etc.) do not adequately or consistently provide information about actual course content and focus. This may make it difficult for both prospective students and employers to gauge whether the course would cover the desired skills and knowledge for a career in interactive media and/or gaming.

Professional learning, experience and career preparation

Courses that aim to prepare students for professional careers may offer or prescribe one or more kinds of professional preparation, such as Professional Practice subjects/units, industry placements and internships, and 'real-world' client-driven projects. Based on survey responses, it appears that such professional experience and education opportunities feature in almost 90% of courses. However, in around 60% of courses, professional experience is optional or elective rather than required for course completion. The most frequently reported forms of professional experience are Industry Placements and Industry Projects. Where Industry Placements are available, they are usually limited or restricted in places, which may reflect a difficulty in finding suitable businesses for student placements.

The majority of courses include Professional Practice subjects, and a significant proportion of these specifically focus on the interactive media and gaming industry. Few business and/or legal studies subjects are offered as part of professional learning. VET courses are more likely to include a higher proportion of Professional Practice subjects, while university courses are more likely to include Industry Placements.

Professional learning and experience is arguably a key factor in employment success and the majority of courses do offer Professional Practice subjects and/or industry placements in the curriculum.

Graduate outcomes

Graduate outcome information (in the form of employment data and graduate feedback) is notoriously difficult to secure generally, and this is also true for games and interactive media graduate outcomes. The majority of respondents do not have actual graduate employment data (and a third of responses had received no graduate feedback on their course),

Nevertheless, around 75% of respondents thought that under 50% of their graduates were employed in the interactive media and/or gaming industry. When asked what students can realistically expect from completing their course, the majority of providers agreed with the statement that "they would be qualified to gain employment in the interactive media and gaming industry, but should be aware that jobs in Australia are limited and highly competitive".

Common themes from the student feedback that respondents had received include: the industry is very competitive and difficult to enter; a need to be persistent with applying for jobs and be willing to relocate; realities of working in the industry do not meet expectations; and graduates need to do more than just what is in their course in order to be employable with some deciding to undertake further study to improve their prospects.

The overwhelming majority of respondents have no actual graduate employment data. Whilst most think their graduates are well qualified to gain employment in the industry, their anecdotal impression is that under 50% of their graduates are employed in the industry. Where it is available, graduate feedback indicates how difficult the industry is to enter and that it has not met graduate expectations of what working in the industry would be like. This indicates a significant expectations gap may exist between course providers, students/graduates, and industry.

Industry engagement in course review processes

One of the primary methods for ensuring the quality and relevance of the curriculum is through the institution's formal process of course review and development. The majority of course providers have some form of curriculum review policy to establish the frequency and process of reviews and curriculum development. Survey responses suggest that course reviews vary in both frequency and the requirement of external input from industry and relevant professions. The Private Provider respondents consistently report annual curriculum reviews, with both internal and external input. The majority of Universities (including dual sector institutions) report that they conduct external curriculum reviews only every 5 years. Formal review processes in universities tend to be major undertakings with reports, recommendations and implementation programs considered not only by Faculties but also by university-level bodies such as Academic Boards and Senates. Nevertheless, the games and media industries are changing so quickly that, unless other on-going revision and improvement processes are in place, 5-yearly reviews could put courses at risk of being out of touch with current practices.

While most external curriculum reviews require some kind of input from industry, the way this is elicited is variable. The most commonly reported forms of industry engagement are the inclusion of interactive media and/or gaming professionals on curriculum review committees and consultation with interactive media/gaming companies and associations. Of the 21 different companies that were consulted for curriculum review in 2010, at least 3 have since closed, including Team Bondi, the most frequently mentioned company in the responses. Significantly, those providers that reviewed courses more frequently were also more likely to use a range of different methods to engage with industry, which may indicate an overall higher level of ongoing engagement with industry.

It appears that providers may not be engaging with industry on formal curriculum reviews frequently enough to keep pace with changes. If the current trend of Australian interactive media and gaming company closures continues, it may become difficult for course providers to connect with local businesses and obtain key industry input. There is potential for industry associations to provide a more active role in representing the industry in curriculum development.

While there has been research on the industry and now course providers as separate groups, the key issue remains how to bring the two together to increase industry awareness of what education and training is available and to increase education provider awareness of what skills and knowledge the industry needs.

The connection between industry and course providers should also inform interactive media curriculum development to ensure that courses offered are relevant and sustainable to counter the current situation of a saturation of courses, excess of graduates, yet still a skills shortage. Some form of consistent guidelines for interactive media curriculum or endorsement of an industry body could assist both prospective students and employers in differentiating the myriad of courses on offer may also be useful.

Regular engagement with the industry and graduate feedback could contribute to the curriculum and inform future developments by providing an external perspective.

Overview

Overall the ISIS Education Research highlights:

- significant growth in courses offered and overall enrolments;
- potential oversupply of graduates in coming years;
- little provision for, and use of, advanced standing or articulation between courses;
- significant variability in specific interactive media and/or gaming content within each course;
- high presence of a range of professional experience and professional learning options focused on interactive media/gaming;
- variability in the frequency and method of industry engagement in formal curriculum reviews;
- need for more information about graduate outcomes; and
- graduates are experiencing difficulty entering and working in the industry.

Recommendations and next steps

The key findings and recommendations presented in the next section are, for the most part, addressed to course providers. They could form the groundwork, or agenda, for effective consultation between educators and industry.

2 Key Findings and Recommendations

A summary of key findings is presented below.

Course enrolments and completions

- Total course enrolments in the sector have increased by 75% from 2005 to 2010, with significant growth in VET courses from TAFE & Private Providers.
- The rise in total enrolments is primarily due to an increase in the number of courses on offer by 150% from 2005 to 2010.
- The average of course enrolments has declined by 30% from 2005 to 2010 showing the growing number of students being distributed over a wider range of courses.
- Total course completions in the sector have increased by 87% from 2005 to 2009, however many of the new courses on offer have yet to produce graduates.
- The average course completion rate, based on 2009 completions, is estimated to be 42%. This rate applied to the 2010 enrolment figures would produce ~1460 graduates in the next couple of years, from just from 30% of course providers in the sector.
- If the completion trends from the surveys are considered indicative and applied to the sector on the whole, it would imply ~4800 graduates entering the industry over the next 1-3 years, with obvious implications for employment.

Recommendations

1. that course providers note that the proliferation of courses largely accounts for growth in student enrolments and projected increase in the number of graduates; and that employment opportunities for their graduates may be very restricted; and
2. that, in proposing new courses in gaming and interactive media, course providers give serious consideration to employment and career opportunities of graduates.

Student demographics

- Women make up just on one third of total student enrolments; the average gender ratio in courses is 32.8% female: 67.2% male.
- The gender ratio difference is more pronounced in the TAFE and Private Providers (26.3% female: 73.7% male).
- Female students are in a majority in only 22% of courses.
- The spread of ages across courses is as expected for entry-level courses, with 80% of students aged 25 or under; 16-21 year olds made up 51.8%, with the next largest group being 22-25 year olds (27.8%).
- The VET level courses have a more even distribution of age, and this could indicate that more students are entering these courses after other initial education or work.
- The majority of students are domestic students, with an average of 84.4% domestic student and 15.6% international students.
- The Bachelor degree courses show more international students (18.83%) than the VET level courses (9%).
- 27% of courses have no international students.

Recommendations

3. that course providers note that women make up just on one third of total student enrolments and introduce programs and initiatives to encourage female students to study gaming and interactive media courses;

4. that course providers note that courses attract predominantly younger students of 25 years or under and consider whether there are opportunities to attract older students, including those already in the workforce, to study gaming and interactive media courses; and
5. that course providers note that only 16% of students in the courses are international students and consider whether there are opportunities to attract international students to study gaming and interactive media courses in Australian institutions.

Articulation and Advanced Standing practices

- The main basis for admission into both the VET and Higher Education courses is Senior Secondary Education (i.e. Recent School Leavers), followed by a VET qualification.
- The majority of students reported for 2010 did not receive any advanced standing or credit towards their course. Where credit was granted in a course, it was to 10% or less of the enrolled student cohort.
- The perception of the majority of course coordinators was also that under 10% of students in their course receive advanced standing.
- Where credit was granted, up to half a year of study was granted towards Bachelor degrees, and approximately 1-2 subjects or units were granted towards Advanced Diplomas and Diplomas.
- The basis for credit being granted showed an emphasis on both VET providers and VET level courses as the main sources of credit.
- Just under half of the providers had formal credit arrangements. Universities were more likely to have formal credit arrangements for commencing students while TAFEs and Private Providers were more likely to have formal credit arrangements for their graduates going on to other courses. This seems to reinforce the observation that the direction of student movement is from VET to Higher Education.
- The main reason given for not having formal credit arrangements is that providers prefer to manage credit applications on a case-by-case basis.
- The responses also indicated that around half the providers, predominantly Universities, processed credit applications from international students differently to domestic students.
- Most university course coordinators believed their graduates were likely to go on to further study in Higher Education.
- Just over half the providers agreed that the presence of Advanced Standing arrangements did influence prospective students in selecting courses, and this was true for both students seeking a pathway into future courses and students who have already completed a course.

Recommendations

6. that course providers across VET and universities note that few students appear to ask for, or receive, advanced standing or credit towards courses when they transition across levels of awards (particularly VET diploma to university undergraduate degrees); and note that arrangements usually are made on a case-by-case basis; and
7. that course providers across VET and universities work co-operatively to develop and promote improved articulation pathways to benefit students, industry and course providers.

Curriculum structure

- 83.9% of courses are offered on either an exclusively full-time or mostly full-time basis.
- With the exception of Australian Skills Quality Authority (ASQA) accredited VET courses, most courses had no external accreditation.
- The majority of all respondents reported that specific interactive media and/or gaming content made up 31-40% of total course content.
- The responses show that course type (specialist or general) is not a clear indicator of the proportion of specific interactive media and/or gaming content in a course.

- Results also showed that Nationally Recognised Training (NRT) programs were highly variable when it came to specific interactive media and/or gaming content, with even the Diploma of Interactive Media ranging from 11-20% to 81-90% of specific interactive media and/or gaming content.

Recommendations

8. that course providers across VET and universities investigate the market for part-time enrolments in their courses to cater for practitioners already working in the interactive media/gaming industry sector and/or those who seek to undertake education in order to work in this sector;
9. that, in their course descriptions and marketing materials, course providers give accurate information about proportion of specific interactive media and/or gaming content in the course.

Professional learning and experience

- Almost 90% of courses offer some form of professional experience. The majority of these options (61.9%) were electives.
- The most frequently used forms of professional experience were Industry Placements and Industry Projects.
- The longer courses, such as Bachelor degrees, were more likely to include an Industry Placement option within the course.
- The majority of respondents reported that Professional Practice subjects or units were part of their course, and a significant proportion of these subjects were focused specifically on the interactive media and gaming industry.
- There were fewer business and legal studies units reported as part of professional learning.

Recommendations

10. that course providers collaborate with professional practitioners in the interactive media/gaming industry sector to ensure that students in the courses have opportunities, and are encouraged, to undertake work placements; and
11. that course providers review the content of their Professional Practice subjects and units to ensure that they provide material focused specifically on the interactive media/gaming industry sector and its workforce profile and opportunities; and material relating to business practice and legal frameworks relevant to business success in this sector.

Graduate outcomes

- The majority of respondents did not have actual graduate employment data.
- Around 75% of respondents thought that under 50% of their graduates are employed in the interactive media and/or gaming industry.
- A third of responses had received no graduate feedback on their course, while Private Providers and TAFES were more likely to have received feedback than Universities.
- Where feedback was available, common themes include: the industry is very competitive and difficult to enter; a need to be persistent with applying of jobs and be willing to relocate; realities of working in the industry do not meet expectations; and graduates need to do more than just what is in their course in order to be employable with some going on to further study to improve their prospects.
- When asked what students can realistically expect from completing their course, the majority of respondents said that their graduates would be qualified to gain employment in the interactive media and gaming industry, but should be aware that jobs in Australia are limited and highly competitive.

Recommendations

12. that course providers continue to make best efforts to elicit information on graduate employment outcomes and the graduate experience of seeking and entering employment;
13. that course providers collaborate with interactive media/gaming professionals to ensure that students are well-informed about the industry and are able to form realistic expectations about employment opportunities and the workforce entry skills that employers are seeking; and

14. that course providers, government, professionals and companies collaborate to extend graduate employment opportunities in interactive media services, applications and technologies for broader uptake in such industry and public sectors as health, education, manufacturing, mining, defence, etc.

Curriculum review and engagement with industry

- Private providers consistently reported that they conducted annual curriculum reviews, incorporating both internal and external input.
- The majority of Universities (inc. dual sector) reported that they conducted external curriculum reviews only every 5 years. Unless they have other curriculum improvement processes in place, in an industry that can change so quickly, this could put them at risk of having courses that may be out of touch with the current practices.
- Those who reviewed courses more frequently are more likely to use a range of different methods of industry engagement.
- The Specialist courses reported the highest number of different forms of industry engagement.
- The most common forms of industry engagement were the inclusion of an interactive media and/or gaming professional on a review committee, as well as consultation with interactive media/gaming companies and associations.
- Of the 21 different companies listed as having been consulted on curriculum review, at least 3 have since closed, including Team Bondi, the most frequently mentioned company in the responses.

Recommendations

15. that course providers ensure that their course curriculum keeps pace with changes in the industry and factors in external economic environment that impact on employment and work opportunities in interactive media and gaming - this may require universities to review courses formally on a more frequent basis;
16. that course providers and industry ensure that their effective engagement and co-operation is a key element of continual improvement in courses and student exposure to, and opportunities for, professional experience;
17. that effective co-operation is in place for course reviews and on-going improvement between course providers and relevant industry peak bodies, in particular the games developers' associations.

3 Introduction

3.1 Review scope and design

The scope of the ISIS curriculum review covered entry level courses from Australian VET and Higher Course providers in Interactive Media and related areas (e.g. Digital Media, Animation, and Computer Gaming). The course types (award levels) are limited to those generally considered as entry level courses within the Australian Qualifications Framework (AQF), i.e. not postgraduate/research courses or non-award courses. The review included Diploma, Advanced Diploma, Associate Degree, and Bachelor Degree level courses.

The review did not include VET awards below Diploma level (i.e. Certificates I-IV). There are a large number of Certificate level courses on offer and these have already been covered by other reports, such as the 'Review of the Digital Games Development: Game Art, Animation and Programming' report, published by Innovation and Business Skills Australia (IBSA)⁷. While certificate level courses are of some interest with respect to advanced standing/credit, they are not as relevant for the detailed curriculum review.

The review focused on a number of key areas that are critical to the understanding of how these courses operate and sit within the broader industry context.

- **Course statistics** – the trends in enrolments, completions, and student demographics of these courses.
- **Articulation and Advanced Standing** – the way in which students move from one course to another with credit transfer arrangements, in particular movement of students between VET and Higher Education courses and vice versa.
- **Curriculum structure and design** – the overall course design, proportion of the course content that is specific to interactive media or gaming.
- **Professional learning, experience and career preparation** – the different types of professional learning utilised in the curriculum such as internships, placements, industry projects, industry simulation, professional practice and business skills, and delivery by industry professionals.
- **Graduate outcomes** – the experience and expectations of graduates in relation to employment, and the number of graduates gaining employment in games and interactive media companies.
- **Industry engagement in course review processes** – the frequency of curriculum review and development; and level and type of industry engagement in the review process.

3.2 Review methodology

The first step of the curriculum review was the development of a comprehensive list of tertiary-level interactive media and gaming courses in both the Higher Education (HE) and Vocational Education and Training (VET) sectors in Australia that would form the basis for the research.

The search for courses was primarily conducted via internet searches and the majority of institutions provide course information on their websites. University websites were located via Universities Australia⁸. A comprehensive list of VET courses was found via Training.gov.au⁹. Other sources included documents such as the IBSA Report - Review of the Digital Games Development: Game Art, Animation and Programming¹⁰. This report includes a comprehensive list of courses and providers for the VET sector.

⁷ Innovation & Business Skills Australia (IBSA) 2009, *Review of the digital games development: Games Arts, Animation and Programming*, December 2009

http://www.ibsa.org.au/Portals/ibsa.org.au/docs/reports/IBSA%20Final%20Report_GamesDevelopment_%20V1.2.pdf

⁸ <http://www.universitiesaustralia.edu.au/page/australia-s-universities/university-profiles/>

⁹ <http://training.gov.au/>

¹⁰ Innovation & Business Skills Australia (IBSA) 2009, *Review of the digital games development: Games Arts, Animation and Programming*, December 2009

http://www.ibsa.org.au/Portals/ibsa.org.au/docs/reports/IBSA%20Final%20Report_GamesDevelopment_%20V1.2.pdf

The key search terms used to locate relevant courses were:

- Game
- Interactive
- Digital
- Media
- Animation

Each search result was then reviewed to determine whether the course was relevant to this curriculum review. All courses that appeared to have an interactive or game related component were included. While these courses may turn out to be less relevant to the interactive media industry, they are included because they are marketed/branded to attract students seeking to study interactive media and games.

3.2.1 Survey design

Whilst some information that the review sought could be obtained from publically available documents and websites, the majority of the information required communicating directly with relevant staff members

Three staged surveys were administered. The ISIS Education Team was mindful of not wanting to overwhelm providers with large surveys and felt a staggered approach splitting the surveys up into three main areas would be more successful. This also made it easier to direct the surveys to specific staff members who may be better placed to respond. Each survey was designed to require no longer than 15 minutes to complete.

The survey questions were designed to obtain the key information required for the research without being onerous for the respondents and to facilitate consistency of data for the purpose of analysis.

Survey 1

The first survey, administered in March-May 2011, covered basic course statistics such as enrolments, completions, and demographic data. This was emailed to course providers as an excel spreadsheet to be completed and emailed back. It was expected that most providers would be able to easily obtain this data from their student systems.

Survey 2

The second survey, administered in May-August 2011, focused on Curriculum Design and included a series of 16 questions on curriculum structure, professional experience, curriculum review processes and engagement with industry, and graduate outcomes. This was emailed as a Word document for providers to enter their responses and email back. Most questions involved selecting a response from a list of options.

Survey 3

The third survey, administered in May-August 2011, focused on Articulation and Advanced Standing. The survey was split into two parts: one part on admission and advanced standing statistics and the other part on questions about articulation arrangements and advanced standing processes. The reason for the split was that it was likely that one part required student system data and the other part was aimed at academic staff more closely connected to the courses (e.g. course coordinators or Associate Deans (Teaching & Learning)).

Copies of each of the Surveys are available in the [appendices](#). Provider and course details were pre-filled on each survey before they were sent out.

3.2.2 Communication with course providers

Key contacts, identified in the initial curriculum research, were selected via provider websites and other information. One of the issues discovered in this process was the difference in publically available staff information between Universities and TAFE/Private Providers. University websites tend to have easily located lists of staff members and positions. TAFE and Private Provider websites by comparison have very little, if any, information about their academic or teaching staff on their public website. This made it difficult to identify an appropriate contact person and general enquiries channels were often unable or unwilling to assist.

The first contact with course providers was an email sent to relevant Deans, Heads, and/or Directors briefly describing the ISIS project and inviting them to participate in the ISIS Curriculum Research. In order to encourage engagement with the ISIS Curriculum Research, participating providers were offered a copy of the ISIS Curriculum Review reports as they were completed, but prior to the publication of the final report. This would enable them to see the results of the research they had participated in and provide them with valuable information not available to the general public. Providers were also assured that their data will be kept confidential and only de-identified, aggregated data will be used in publications and reports. However, a list of participating providers and courses would be included for reference unless they had asked that they not be listed.

Communication was primarily conducted via email, with phone calls were necessary. A few face-to-face meetings were conducted with selected providers.

A number of issues were encountered including staff at providers not being able to easily access their data; providers unwilling to provide data; and many cases of non-responsiveness despite multiple attempts over a couple of months to contact several different people within a provider. With those providers that responded initially, a number did not subsequently return either the surveys or respond to further contact. Regular follow ups were made over the course of the project to check in with providers to see if they needed assistance with the surveys and to remind them of the timeframe for returning the surveys. There was only one faculty within one University that specifically declined to participate in the surveys.

3.2.3 Data collection issues

It was hoped initially that a large portion of data on course statistics such as enrolments, completions and demographics could be provided by the Department of Education, Employment, and Workplace Relations (DEEWR). However, after examining the DEEWR data collection documents and speaking with staff in student administration sections of a number of universities, it was evident that it would not be possible to compile the data from centralised sources.

4 Overview of Interactive Media and Gaming courses in Australia

From the information collected from the initial course search, some key observations can be made about interactive media and gaming courses in Australia. The course search found a total of 166 courses from 56 different providers. The majority of providers were Universities (including Dual Sector University/TAFE), with 29 providers offering 89 courses. The complete list of providers and courses is provided in the appendices.

Provider Type	# Providers	% Providers	# Courses	% Courses
Dual Sector University/TAFE	5	8.9%	28	16.9%
University	24	42.9%	61	36.7%
TAFE	15	26.8%	50	30.1%
Private Provider	12	21.4%	27	16.3%
Total	56	100%	166	100%

Table 4.1

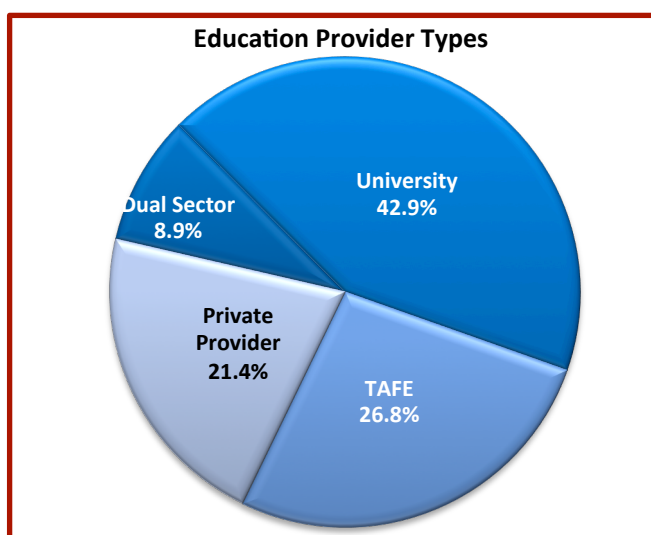


Figure 4.1

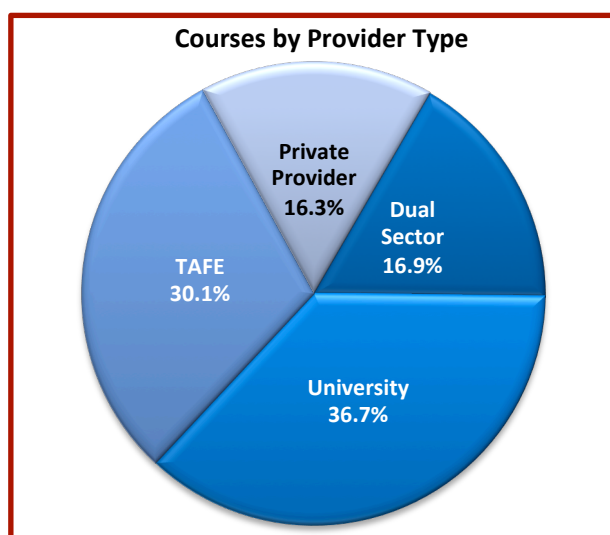


Figure 4.2

Courses by State

Table 4.2 shows the breakdown of courses by state, with the majority (78%) of the courses being delivered in Victoria, NSW and Queensland. Note that some courses are offered in multiple states.

State	Courses	%
VIC	52	27.7%
NSW	51	27.1%
QLD	43	22.9%
WA	17	9.0%
SA	10	5.3%
ACT	9	4.8%
TAS	5	2.7%
NT	1	0.5%
Total	188	100%

Table 4.2

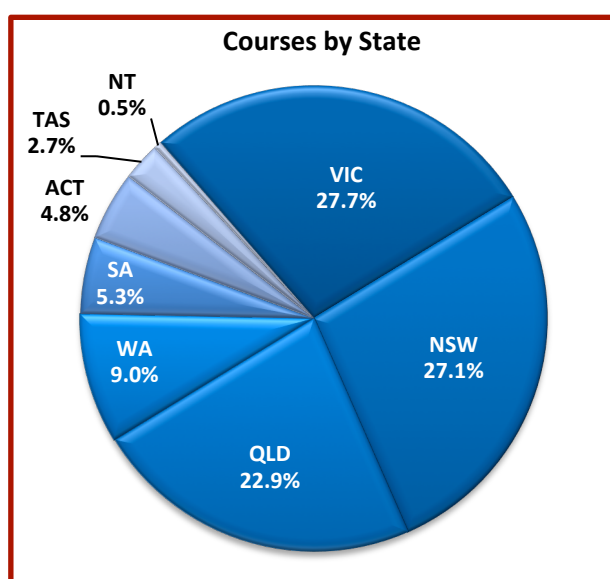


Figure 4.3

Courses by course level and type

The course levels that are included in the ISIS curriculum research are:

- Bachelor degrees
- Associate degrees
- Advanced Diplomas
- Diplomas

These courses generally fall into three broad course types:

- Specialist courses in interactive media or related areas
- Creative Industries/Arts courses with a major/specialisation in interactive media or related areas
- Computer Science/IT courses with a major/specialisation in interactive media or related areas

Course Level	Course Type	#	%
Bachelor		90	54.2%
	Specialist	24	14.5%
	Creative Industries/Arts with major	39	23.5%
	Computer Science/IT with major	27	16.3%
Associate Degree		2	1.20%
	Specialist	1	0.6%
	Creative Industries/Arts with major	1	0.6%
Advanced Diploma		20	12.05%
	Specialist	5	3.0%
	Creative Industries/Arts with major	15	9.0%
Diploma		54	32.5%
	Specialist	27	16.3%
	Creative Industries/Arts with major	15	9.0%
	Computer Science/IT with major	12	7.2%
Total		166	100.00%

Table 4.3

The majority of the courses identified are Bachelor degree courses (54.2%), followed by Diplomas (32.5%), then Advanced Diplomas (12.0%). The most common broad course type is a Creative Industries/Arts courses with a major (42.2%).

The most common combinations are:

- Bachelor degree in Creative Industries/Arts with a major
- Bachelor degree in Computer Science/IT with a major
- Specialist Diploma

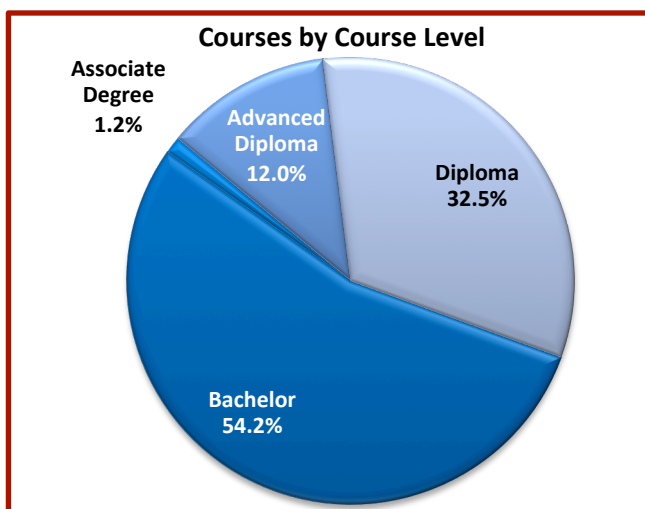


Figure 4.4

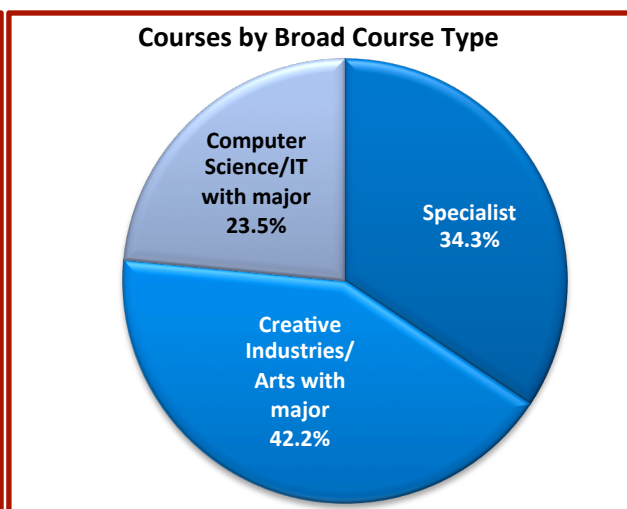


Figure 4.5

Courses per Provider

Error! Reference source not found. provides a list of all course providers covered and the number of courses they offer. There are a total of 56 different providers included.

The top five providers offering the most courses are:

- Swinburne University of Technology, VIC (11)
- Queensland University of Technology, QLD (9)
- Royal Melbourne Institute of Technology, VIC (8)
- Victoria University, VIC (6)
- Hunter Institute of TAFE, NSW (6)

Academy of Information Technology Pty Ltd	3
Academy of Interactive Entertainment	4
Australian National University	1
Billy Blue College of Design	2
Bond University	2
Box Hill Institute of TAFE	2
Canberra Institute of Technology	4
Central Institute of Technology	5
Central Queensland University	2
Charles Darwin University	1
Charles Sturt University	3
Chisholm Institute of TAFE	1
Curtin University of Technology	3
Deakin University	3
Edith Cowan University	4
Flinders University of South Australia	2
Gold Coast Institute of TAFE	2
Griffith University	4
Holmesglen Institute of TAFE	2
Hunter Institute of TAFE	6
Illawarra Institute of TAFE	4
James Cook University	3
JMC Academy	3
Kangan Institute of TAFE	2
La Trobe University	1
Metropolitan South Institute of TAFE	3
Monash University	2
Murdoch University	4
Northern Sydney Institute of TAFE	5
Nova Institute of Technology	1

QANTM College	5
Queensland University of Technology	9
RAFFLES College of Design and Commerce	3
Royal Institute of Australia	1
Royal Melbourne Institute of Technology	8
Southbank Institute of Technology	3
Southern Cross Education Institute	1
Swinburne University of Technology	11
Sydney Institute of TAFE	4
TAFE SA	5
Tasmanian Polytechnic	2
University of Adelaide	1
University of Ballarat	2
University of New England	1
University of New South Wales	2
University of Queensland	2
University of South Australia	2
University of Southern Queensland	3
University of Sydney	1
University of Tasmania	3
University of Technology, Sydney	1
University of Wollongong	2
Victoria University	6
Victorian Institute of Technology	1
Victory College of Design	2
Western Institute of Technology	1
Total	166

Table 4.4 Courses per Provider

5 Course Statistics

The data that this chapter is based upon was obtained directly from course providers via ISIS Survey 1 with the majority of the responses received between March –May 2011. The responses received represent 19 of the 56 education (31.2%) providers and 64 of the 166 (38.55%) courses. The list of those providers and courses and a breakdown of responses by provider type, state, course level, and broad course type are available in the Appendices.

5.1 Course Enrolment Statistics

Total course enrolments increased from 2157 enrolments in 2005 to 4479 enrolments in 2010 (108% growth). Enrolments in university courses have increased by 61% from 2092 to 3375; this is consistent with a 65% increase in enrolments in undergraduate Bachelor courses from 1964 to 3249 over the five-year period.

The most significant growth has been in the enrolments from TAFE and Private Providers, which has increased by 1598% from 65 to 1104 enrolments over the period 2005-2010, which is consistent with the 537% increase in Advanced Diploma and Diploma course enrolments.

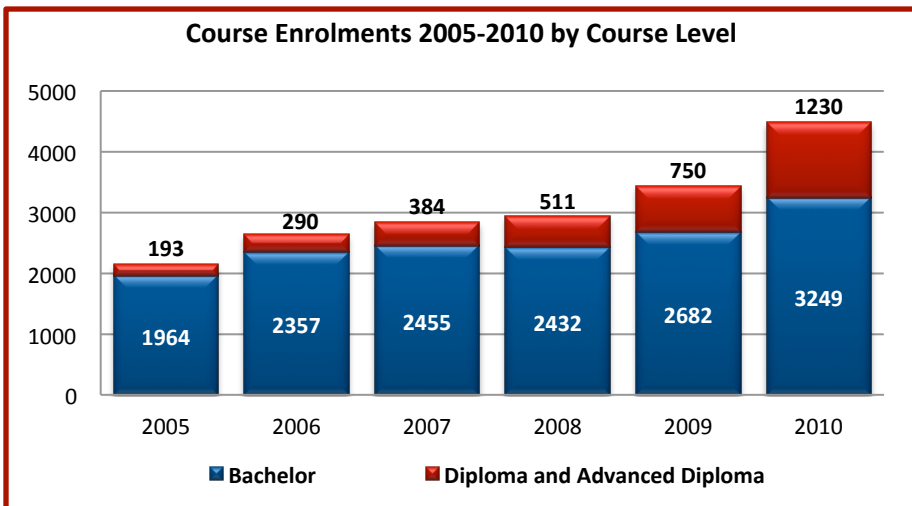


Figure 5.2

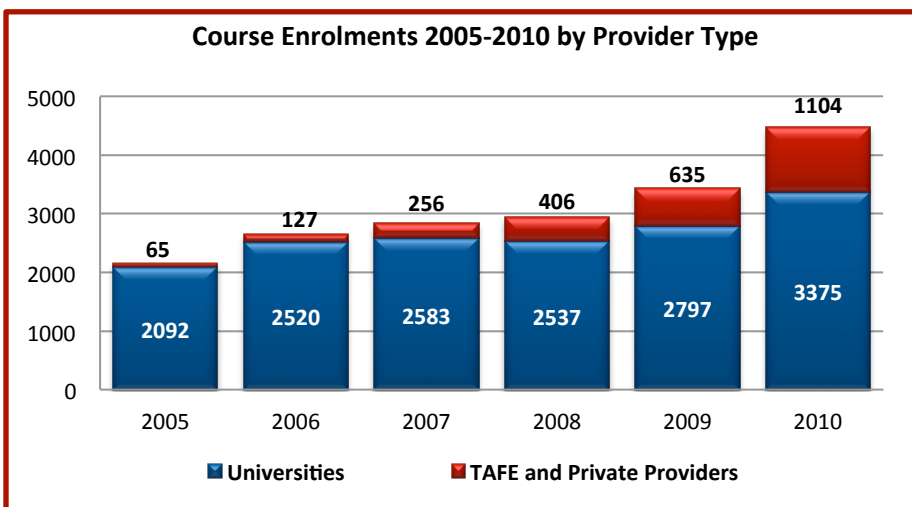


Figure 5.1

However, the overall increase in enrolments is most likely the result of an increase in new courses being offered rather than growth within individual courses. In the data received, the number of courses on offer grew from 22 in 2005 to 63 in 2010 (186% growth). However the enrolments from courses that have been on offer since 2005 are fairly stable. The average enrolments per course have declined by 27% which would be consistent of a relatively stable number of students being spread across more courses.

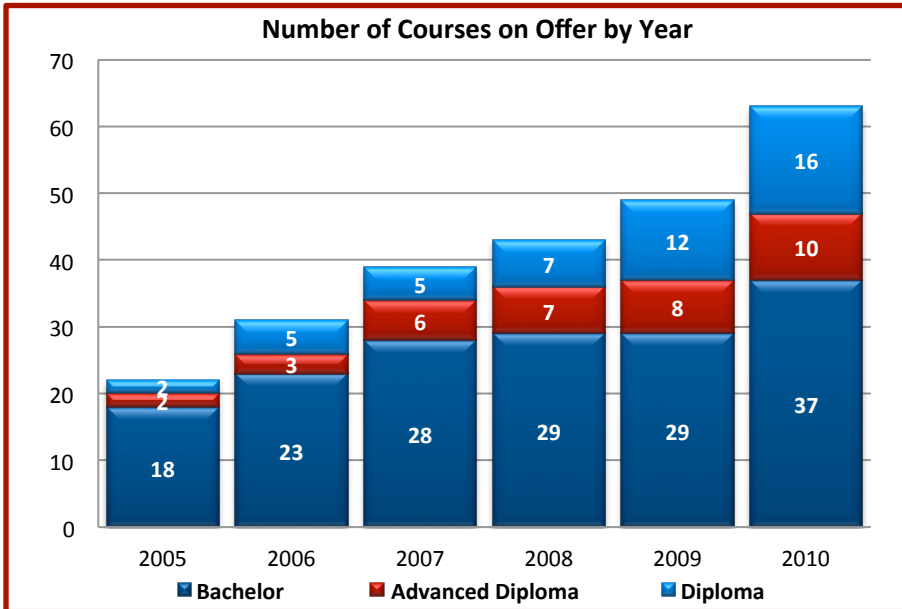


Figure 5.3

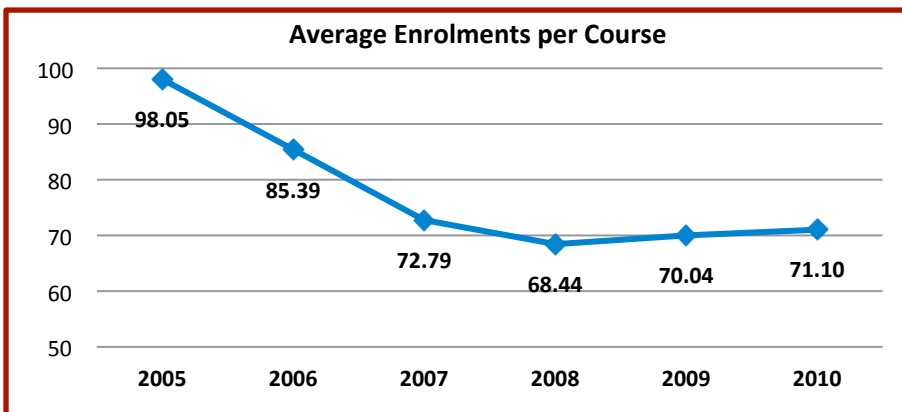


Figure 5.4

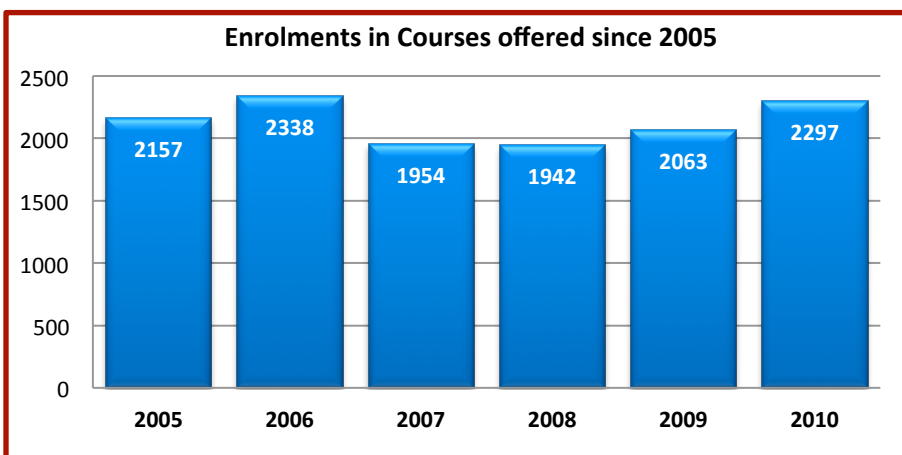


Figure 5.5

5.2 Course Completion Statistics

The increase in course completions (graduates) from 467 graduates in 2005 to 988 graduates in 2009 (112% growth) is consistent with the 108% increase in course enrolments. However, many of the courses included in the survey responses have commenced only within the past couple of years and have yet to have a cohort graduate.

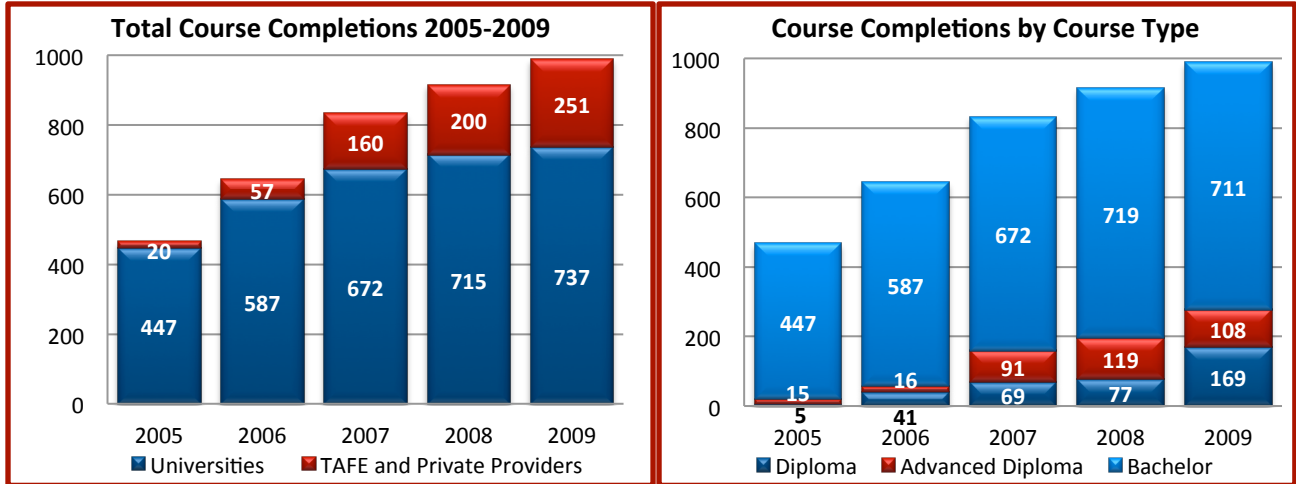


Figure 5.7

Figure 5.6

It is difficult to gauge accurate completion rates from the data provided. Based on the average full-time duration of the courses (and not taking into account part-time students), the average completion rate for 2009 was around 41%. If this rate of completion were applied to the 4479 enrolments reported for 2010, there would be approximately 1800 graduates entering the industry in the next 1-3 years (83% increase on 2009 completions). And that is from just 38% of courses on offer.

If this trend is assumed to be indicative of the sector and applied to all providers, it would imply approximately 4700 graduates entering the industry over the next 1-3 years, an increase of 376%. Figure 4.8 provides a visual representation of what course completion trends may look like.

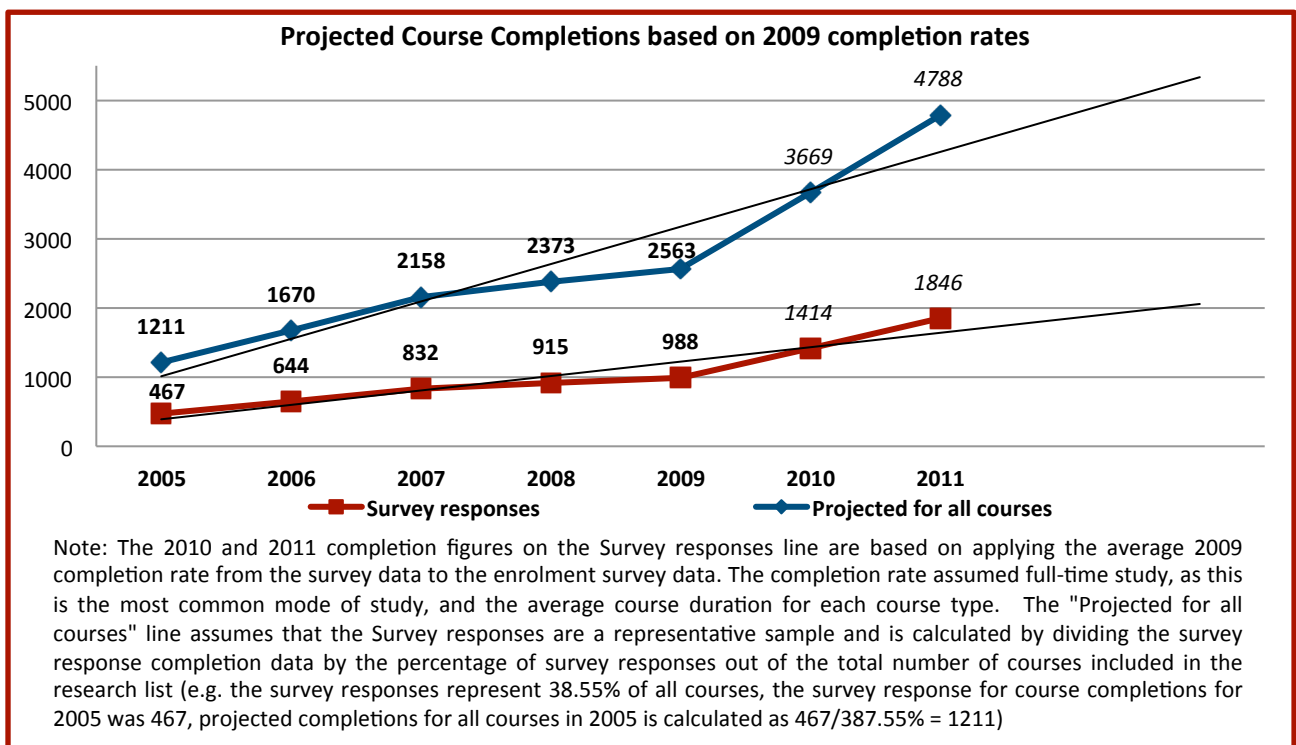


Figure 5.8

5.3 Course Demographic Statistics for the 2010 cohort

5.3.1 Gender

The average gender ratio for course enrolments in 2010 was 69% male to 31% female, which is not unusual for technology-based fields of study. The greatest gender difference was found in the TAFE & Private Providers, the VET level courses, and the Computer/IT courses, with women appearing to favour University Bachelor degrees that are predominantly a Creative Industries/Arts course.

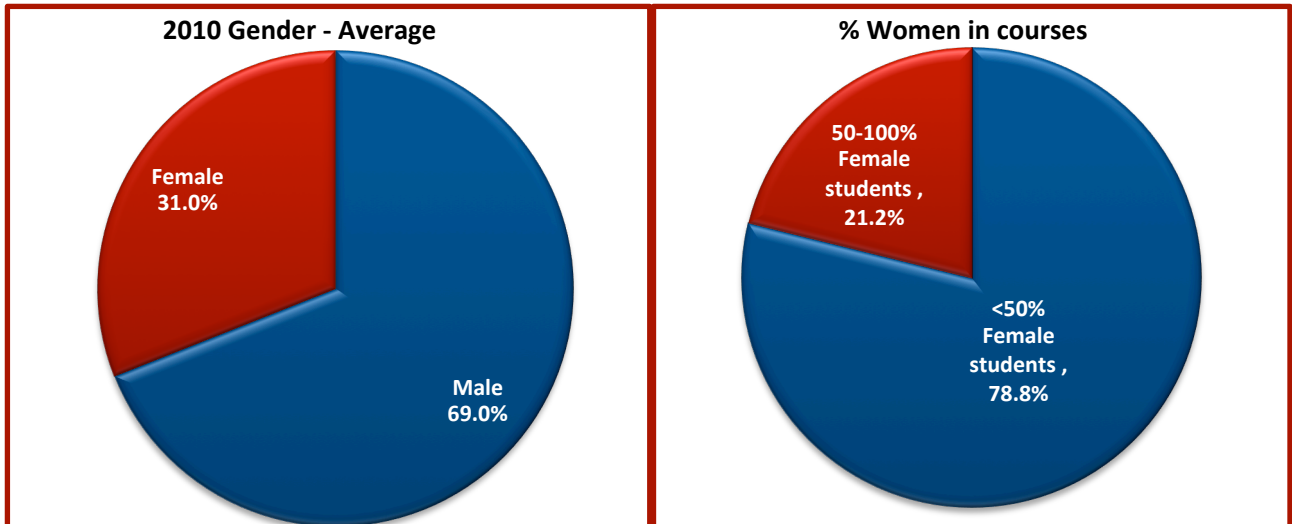


Figure 5.9

Figure 5.10

Women in Interactive Media and Gaming Courses

The majority of courses (78.8%) had fewer than 50% female students and none of the Specialist courses had greater than 50% female students.

5.3.2 Age

The majority of students were the 16-21 year old age bracket, which is to be expected for undergraduate courses. The students are more evenly distributed among the age brackets in the VET level courses, indicating that students are going into these courses later in life, possibly after completing some education or working for a few years.

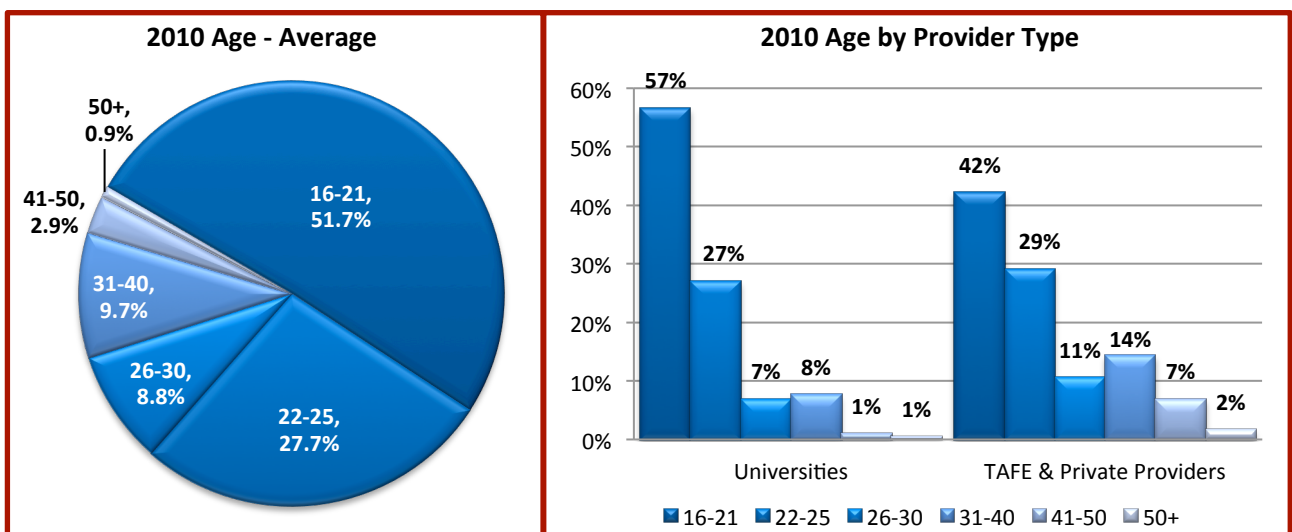


Figure 5.12

Figure 5.11

Other influencing factors may include the cost of the courses. University tuition fees can be deferred through the HECS-HELP loan scheme. A similar scheme, FEE-HELP is available for a small number of Diplomas and Advanced Diplomas; however most students are required to pay their tuition fees upfront. While the total fees for a VET course may be less than those of a University course, the upfront payment requirement can be a barrier for prospective students, especially recent school leavers.

5.3.3 Student Type (Domestic/International)

The majority (85.9%) of students in 2010 were domestic¹¹ students. While some courses had only domestic students enrolled (28.1%), the highest proportion of international students in a single course was 75%. The median of the responses was 92% Domestic and 7.1% International. The majority of international enrolments were in generalist Bachelor degrees.

The lower proportion of international students in these courses may be due to a range of factors such as future employment prospects, opportunity for permanent residency, and whether Australian interactive media and games courses are more attractive and competitive than those offered in other countries.

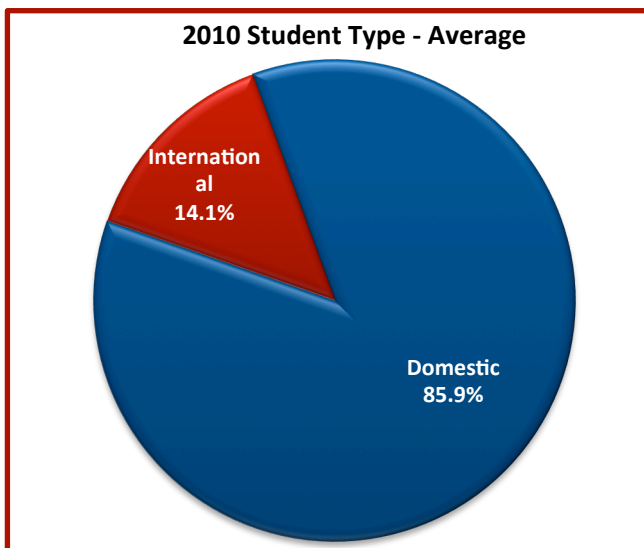


Figure 5.13

¹¹ A domestic student is defined as a student who is an Australian Citizen, Australian Permanent Resident, or New Zealand Citizen.

6 Course Admissions and Advanced Standing in 2010

The response rate to the survey question on 2010 admissions was low, providing data for only 22 courses (13.3%). Caution should be exercised in drawing generalising the data available but it may inform discussion, prompting follow-up research and consideration of practices. Tables showing the admissions data by provider type, course level, and course type are available in the [appendices](#).

6.1 Admissions

The survey asked providers to list how many commencing enrolments (i.e. new students) they had for 2010 and select the basis of admission. The types of basis of admission are from the DEEWR Higher Education Provider reporting data element on basis of admission, with an additional field for providers to specify any type not listed. The only other type of admission that was reported was that of an interview and/or portfolio requirement. The survey responses covered a total of 1,242 students from 22 courses who were admitted in 2010.

The majority of students included in the responses were admitted on the basis of an Interview/Portfolio (43.8%), followed by Secondary Education (24.8%). The Interview/Portfolio category often includes a minimum secondary school requirement as well. Secondary Education would primarily be comprised of 'Recent High School Leavers', but would also include a small number of students who had completed a Senior Secondary program through a TAFE, adult college, or private provider.

Where respondents has Interview/Portfolio as an admissions basis, nearly all their students where admitted using that basis. Where respondents did not have Interview/Portfolio as an admission basis, around 60% of students were admitted from Secondary Education and 35% from VET. Mature age and professional experience did not make up a significant percentage of total admissions.

A number of respondents (10.4%) reported that students had been admitted on the basis of a Higher Education qualification, even though none of the Diploma to Bachelor level courses required a higher education award for entry.

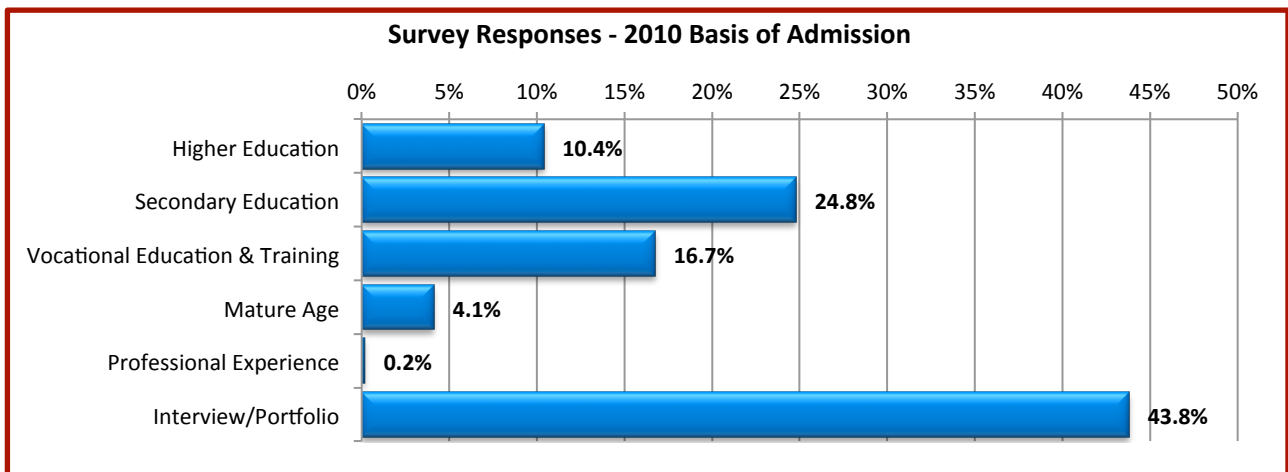


Figure 6.1

6.2 Advanced Standing

The survey asked providers to indicate how many of their commencing students in 2010 received advanced standing towards their course. Just under a half of responses (46.4%) indicated that no students received advanced standing. Given that a majority of commencing students have come straight from school, and would not be eligible for Advanced Standing, this figure is unsurprising.

Where students had received advanced standing in a course, it was generally under 10% of students in that cohort. This agrees with the responses to the survey question in Part 2 in which the majority of course coordinators indicated that fewer than 10% of students in their course had received advanced standing.

Universities (including Dual Sector providers) were the most likely to have granted credit towards a course. In 15 of the 28 courses covered by the survey responses, a small number of students had received advanced standing. The following section on advanced standing statistics is based on this small group of students.

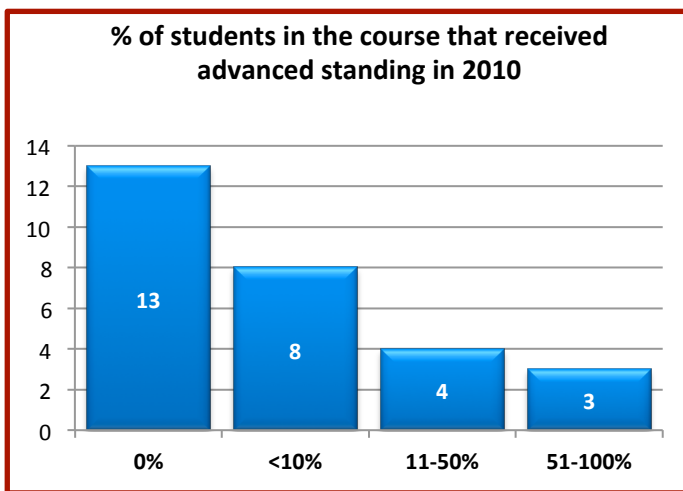


Figure 6.3

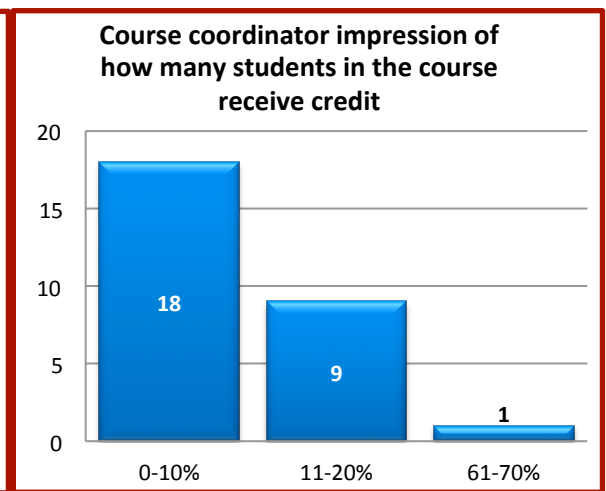


Figure 6.2

6.3 Average credit granted

More credit on average was granted towards Bachelor degrees than to Diplomas or Advanced Diplomas. The average specified credit granted towards Bachelor degrees was just over half a year of full-time study and the average for Advanced Diplomas and Diplomas would generally equate to 1-2 units of study. The maximum credit reported for a Bachelor degree was 1.5 EFTSL¹², which would be half of a 3 year degree.

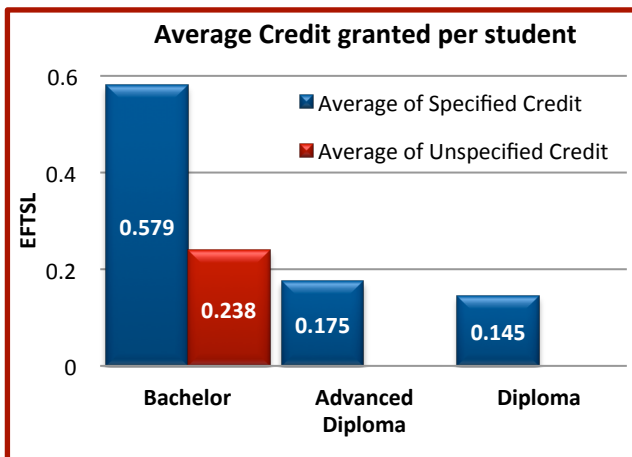


Figure 6.5

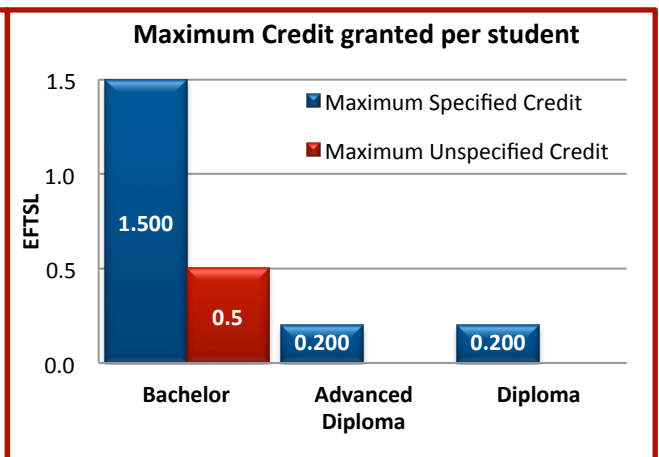


Figure 6.4

¹² EFTSL = Equivalent Full-Time Study Load. 1 EFTSL = 1 full-time year of study

6.4 Basis of credit granted

The next series of survey questions looked at the basis of the credit granted. These questions are based on the DEEWR Higher Education reporting data elements and cover the following three main areas with a set number of categories:

Source	Award type	Provider type
- Australian Higher Education Provider	- Certificate I or II	- University
- Australian VET Provider	- Certificate III or IV	- TAFE
- Overseas Provider	- Diploma	- Private Higher Education Provider
- Work experience in industry	- Advanced Diploma	- Private Vocational Education Provider
	- Associate Degree	- Overseas institution
	- Bachelor Degree	- Other
	- Postgraduate course	

For each of the above providers were asked to list the average percentage of credit granted in each category.

Source

Most frequently, credit was granted to students who had achieved qualifications from Australian Vocational Education and Training (VET) providers (39.4%) and Australian Higher Course providers (26.1%). Universities also granted credit to students with qualifications from overseas providers. VET providers predominantly granted credit to students with qualifications from other Australian VET providers.

Award type

The two main awards for which credit was granted were Bachelor degrees (38.2%) and Diplomas (30.0%). When analysed against the course the credit was granted for, the results for Bachelor degrees showed credit was granted on the basis of Diplomas, Advanced Diplomas and other Bachelor degrees. However the VET level courses showed credit was given for a wide variety of awards, including higher-level courses of Bachelor and Postgraduate courses. This may support the inference that students who have completed higher education courses are going on to VET courses, however this is based on a very small sample.

Provider type

The results for advanced standing granted by provider type were consistent with the results of credit awarded by source (see above). Credit was granted to incoming students with qualifications from TAFEs, Universities and Overseas Providers. Only infrequently was credit granted to students holding qualifications from the Australian Higher Education or VET Private Providers. In the responses provided, the TAFES exclusively granted credit to students from other TAFES. This is likely due to the National Recognised Training programs facilitating easy transfer between institutions.

7 Advanced Standing and Credit transfer arrangements

7.1 Credit Arrangements – Coming In

On the whole, just on a half of the respondents (31 respondents or 52.5% of all respondents) had no credit arrangements for students entering their course. However, when examined by provider type, there was a noticeable difference with the majority of Dual Sector responses having credit arrangements while the majority of Private Provider responses had no credit arrangements. Universities and TAFEs were fairly evenly split.

7.2 Credit Arrangements – Going Out

Over a half of the respondents (34 respondents representing 57.6% of all respondents) had no credit arrangements for students completing their course to gain credit into another course. The distribution of responses by provider type again showed significant differences. This time the majority of Private Provider and TAFE responses indicated they had arrangements for their graduates to gain credit into other courses while the majority of Universities indicated they had no such arrangements. In many ways this is to be expected at the usual progression is for students to go from VET level courses on to Higher Education.

7.3 General Credit Arrangements

The responses for general credit arrangements were more positive with 37 (62.7%) of responses indicating that they had some general credit arrangements. These credit arrangements are usually the guidelines for granting credit on a case-by-case basis. General credit arrangements include broad arrangements that a particular type of award may be generally eligible for up to a certain amount of credit towards a course. They may also include maximum amounts of credit that may be awarded towards particular courses. Often these types of arrangements refer to unspecified credit. For example: A completed Diploma may provide up to 1 EFTSL of unspecified credit towards a Bachelor degree.

The survey responses to these questions were supplemented by information found on provider websites. The search of websites showed a wide variance in how easy information on credit arrangements is to find and how much detail was publically available. Websites ranged from having no publically available information to very comprehensive and detailed information that allowed prospective students to search for credit arrangements based on either the qualifications they already hold or by the course they wish to enter. The website search also discovered a number of instances where conflicting information was found between two providers. For example: University A's website lists that it will grant X credit towards a Bachelor degree for a Diploma from TAFE B. TAFE B's website lists that students completing their Diploma will receive Y credit towards the Bachelor degree from University A.

8 Advanced Standing Practices

The preliminary research had indicated that some of the issues around how advanced standing is handled within institutions included differences between the way domestic and international students are processed and a variety of barriers to institutions creating formal credit arrangements.

8.1 Differences between domestic and international student applications

Just over half (53.1%) of providers reported some differences in how they process applications from domestic or international students while the rest reported no differences or no international students. The main differences were applications being assessed at different points in the admission process (e.g. pre or post enrolment), different staff delegated to assess advanced standing, and policies set by different divisions (e.g. separate domestic and international recruitment/admissions areas). Universities reported the most differences in processing applications, which was expected as they are generally larger institutions with more international students. Private providers reported no differences and the majority of the TAFE responses indicated no differences or no international students.

8.2 Reasons for not developing formal credit arrangements

Providers were asked to select the statements that they agreed contributed to why they did not have formal credit arrangements. The list of statements was based on some of the issues that had come up through the preliminary research. The choice of statements was as follows and providers were asked to select all that apply:

- Prefer to handle applications for credit on a case-by-case basis.
- Not enough students applying for credit to make it worth creating formal arrangements.
- Too much time and effort required to keep up with curriculum changes from multiple providers and courses each year.
- Inadequate information on the curriculum of other courses to determine equivalence of units.
- Desire to control enrolment numbers (i.e. not wanting to “guarantee” entry via particular pathways).
- Do not want to confuse students with courses that may provide credit but not entry into the course.
- This course is highly prescriptive there is not much elective space in which unspecified credit could be used.
- Accreditation requirements (e.g. Australian Computer Society) restrict how much credit can be granted and in what areas of the course.
- Other course providers are not willing to enter into formal agreements.
- Other reason (please detail).

The most frequent response was that they prefer to handle applications for credit on a case-by-case basis, with a handful of responses for the other reasons. Around a third of providers did not select any issues. These responses appear to confirm some of the anecdotal information obtained in the preliminary research through discussions with some academics. As the number of students applying for credit is quite low (which the data from part 1 of the survey confirms), it is feasible to assess them on a case-by-case basis and may not worth trying to create and maintain formal arrangements with other providers.

8.3 Further study after course completion

Providers were asked to indicate whether they thought students completing their course were likely to go on to further study and if so, what level of study. This question was designed to get some indication of provider expectations of student movement after graduation. The majority (60.5%) of responses indicated that their students would probably go on to further study at a Higher Education level with only a few indicating further study at VET level. Around a quarter of responses selected 'None' or 'Unsure'.

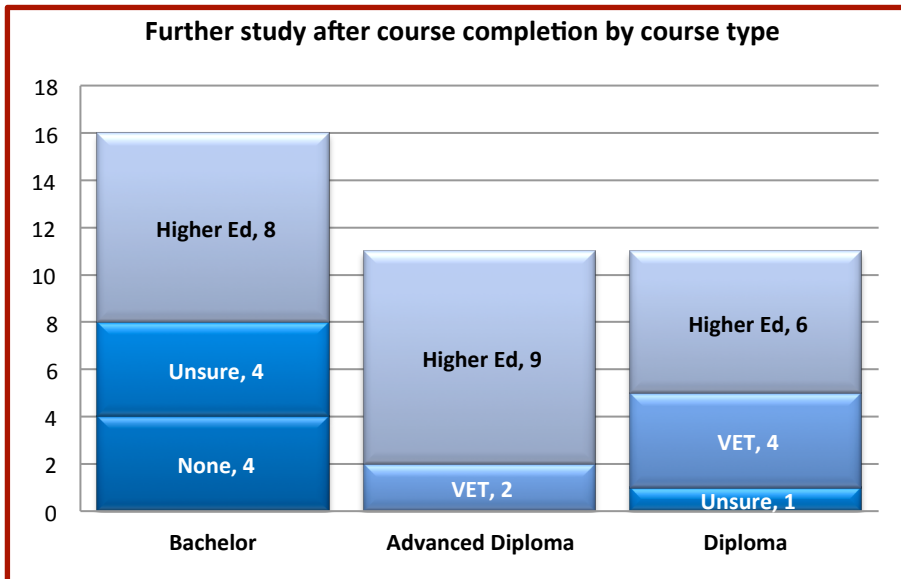


Figure 8.1

8.4 Advanced standing influence in course selection

Providers were asked whether they felt that advanced standing options were an important consideration for prospective students when selecting a course. The responses were fairly evenly split with 18 (56.3%) responding 'Yes' and 14 (43.8%) responding 'No'. The TAFE and Private Providers were the only providers to answer 'Yes, as a pathway into another course', representing 31.3% of the 'Yes' responses. The majority of responses to 'Yes, only if already completed a course' were from Universities, making up the rest of the 'Yes' responses. This is as expected given that VET courses are often considered a pathway into Higher Education.

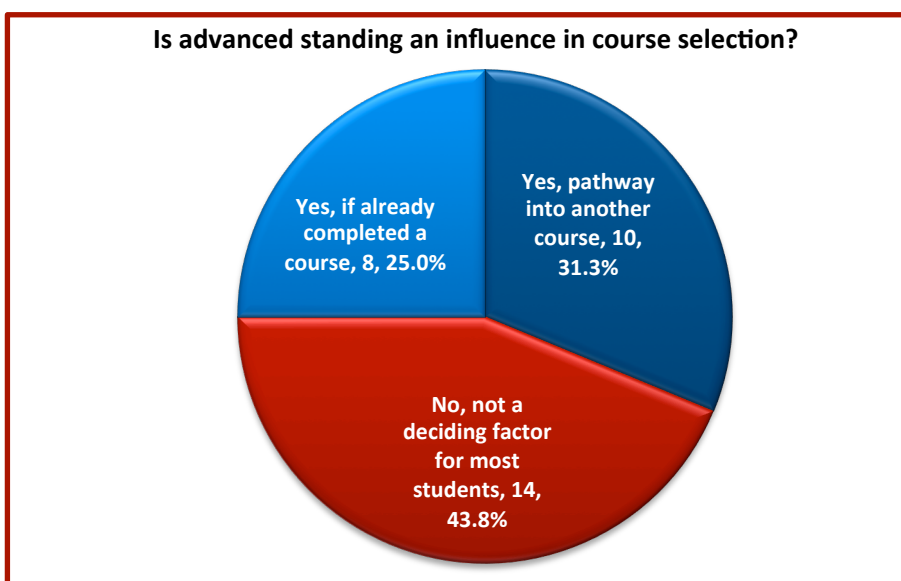


Figure 8.2

9 Curriculum Design

9.1 Course types

In the initial stages of research, the courses identified for this project were categorised as being one of three types of course, based on the course description. In Survey 2, providers were asked both to select which category was most appropriate for their course and also to indicate what proportion of the course is specifically focused on interactive media and/or gaming content. Where there was no survey response, additional data has been estimated from the provider website if sufficient course information has been available.

The course type options that providers could select included:

- a specialist course in Interactive Media and/or Gaming;
- a Creative Industries/Arts course with a major/specialisation in Interactive Media and/or Gaming;
- a Computer Science/IT course with a major/specialisation in Interactive Media and/or Gaming;
- not a course with significant Interactive Media and/or Gaming content.

The largest group in the responses was the Creative Industries/Arts courses with a major (17 respondents, 48.6%), followed by specialist courses (14, 40.0%), and Computer Science/IT courses with a major (3, 8.6%). Only one course was listed as not being a course with significant interactive media or gaming content, though the response also indicated in the next question that the course contained 31-40% specific interactive media content.

The self-reported course type was also examined next to the course type estimated from the initial research. In each case the concurrence of the estimations were around 75%. For the analysis of the survey data, the original course type estimations are used to be consistent with earlier reports.

9.2 Mode of study

The mode of study responses revealed that the majority (52, 83.3%) of courses were offered on either an exclusively full-time or mostly full-time basis. While this is not as much of an issue for students who are recent school leavers enrolling in their first course, it could become a barrier for students who have already entered the workforce and are seeking to re-train or upgrade their skills.

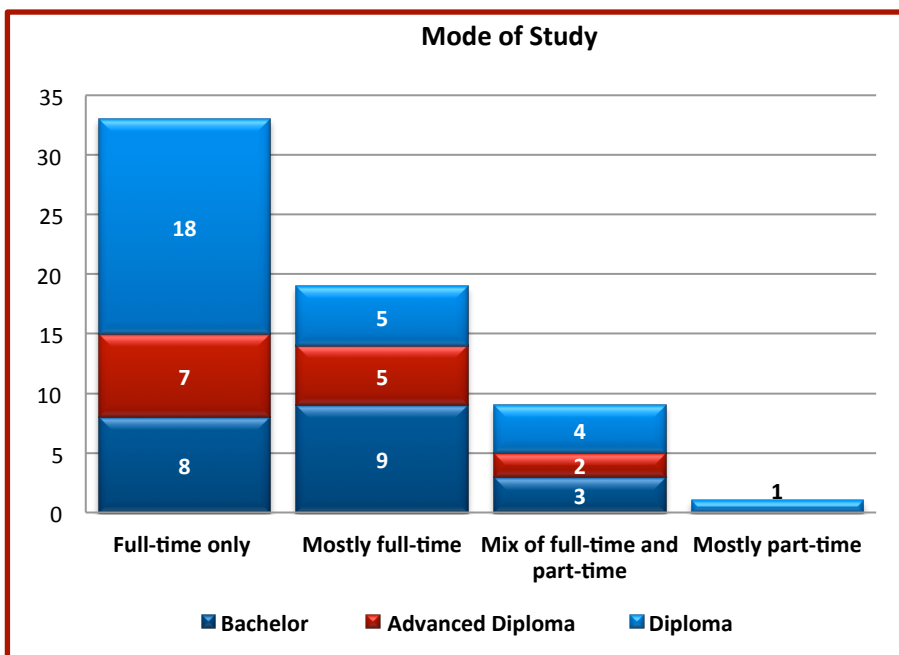


Figure 9.1

9.3 Postgraduate options

The focus of the ISIS education program is on undergraduate, entry level courses from Diploma to Bachelor degree. To determine whether postgraduate courses would be a significant area of further research, Survey 2 asked providers to indicate whether they offered any postgraduate options in interactive media/gaming and to indicate the level of course.

Only 7 of 18 University responses indicated that there were no postgraduate options available. When compared against the course type of the main course that the response was for, the majority of postgraduate options appear to be associated with the Creative Industries/Arts courses.

9.4 Accreditation

While there is currently no organisation that provides accreditation specifically for interactive media or gaming courses, the survey looked at whether these courses have accreditation from other organisations at a broader industry level. The majority of VET level courses were accredited with the Australian Skills Quality Authority (ASQA) either as Nationally Recognised Training (NRT) packages or other accredited courses¹³. Aside from ASQA accreditation, most courses had no accreditation (27.1%). The only other accrediting organisation that was reported was the Australian Computer Society (ACS), which accredits Computer Science and IT higher education courses, but not specifically interactive media or gaming courses. Some providers listed organisations that do not technically provide accreditation but may endorse a particular course. These organisations included:

- Institute of Electrical and Electronic Engineers (IEEE)
- Association for Computing Machinery (ACM)
- Australian Screen Production Education & Research Association (ASPERA)
- SkillsHub Victoria
- Games Developers' Association of Australia (GDAA)

The survey responses for professional accreditation were are follows:

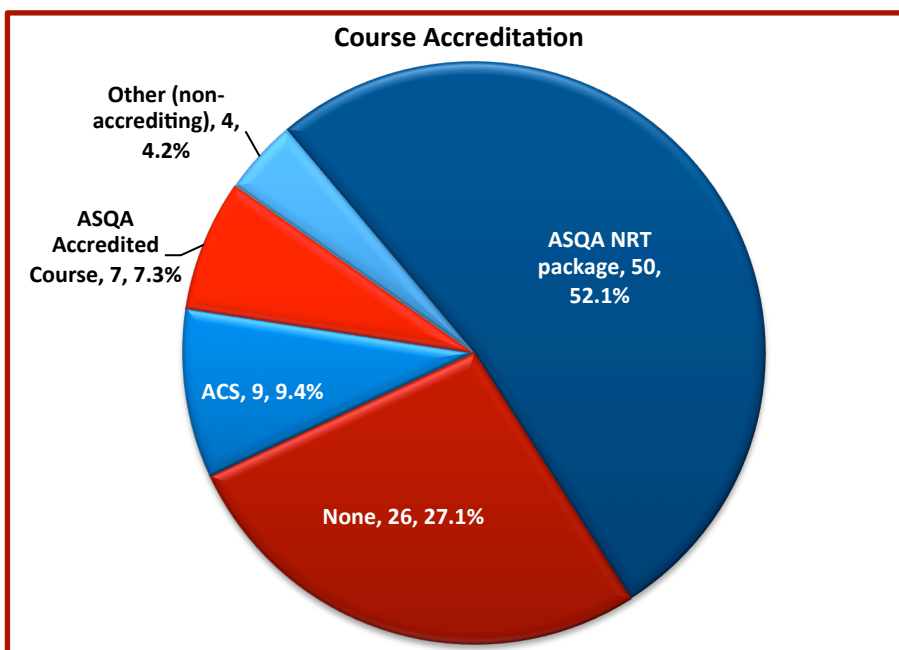


Figure 9.2

¹³ Information on ASQA registered courses obtained from Training.gov.au (TGA), the official National Register of information on Training Packages, Qualifications, Courses, Units of Competency and Registered Training Organisations (RTOs)

9.4.1 Australian Skills Quality Authority (ASQA) Accredited Courses

The ASQA accredited courses fall into two main categories: Nationally Recognised Training (NRT) packages and other accredited courses. The Nationally Recognised Training packages are intended to have nationally consistent curriculum standards. The NRT packages included in the ISIS research include:

- ICA50905 - Diploma of Information Technology (Multimedia) (First release 8/07/2010)
- CUF50207 - Diploma of Interactive Digital Media (First release 11/11/2010, Supersedes and is equivalent to CUF50701 - Diploma of Multimedia)
- CUF60107 - Advanced Diploma of Screen and Media (First release 11/11/2010, Supersedes and is equivalent to CUF60101 Advanced Diploma of Screen, CUF60301 Advanced Diploma of Broadcasting, CUF60501 - Advanced Diploma of Multimedia)
- CUF50107 - Diploma of Screen and Media (First release 11/11/2010, Supersedes and is equivalent to CUF50401 Diploma of Screen, CUF50501 - Diploma of Broadcasting)

Courses that are not a NRT package can also be registered with ASQA as accredited courses providing they meet the ASQA standards and are effectively not duplicating a NRT package. These courses include:

- 80841ACT - Advanced Diploma of Professional Game Development (Registered from 12/03/2007)
- 80758ACT - Advanced Diploma of Design (Digital Media) (Registered from 1/01/2005)
- 52206 - Advanced Diploma of Animation (Registered from 27/01/2010)
- 52046 - Diploma of Interactive Games Development (Registered from 26/11/2008)
- 52213 - Diploma of Interactive Games Development (Registered from 27/01/2010)
- 91277NSW - Diploma of 3d Animation And Digital Effects (Registered from 12/10/2005)

It should be noted that the above courses are all Vocational Education and Training (VET) courses. There is an overlap that allows Higher Course providers to offer Diplomas and Advanced Diploma under the Higher Education framework rather than the VET framework. Higher Course providers that are self-accrediting (i.e. all Universities and some private providers) are not required to register their Diplomas and Advanced Diplomas with ASQA. As there was only one Higher Education Diploma included in the ISIS research, this has not been present as a separate category.

10 Focus on Interactive media and/or gaming content within a course

The information on proportion of content specific to interactive media and/or gaming showed a wide variation across courses. There are no formal standards on how much specific interactive media and/or gaming content is required in order to brand a course as an “Interactive Media or Gaming” course and this was a key area of interest for the ISIS research to determine how much variance there was across the courses. The information for interactive media/gaming content in the course was sourced from both the survey responses and provider websites. Survey respondents were asked to select the proportion of their course that was specifically interactive media and/or gaming content from a list of 10 bands of 10% each. For ease of further analysis, the percentage bands were then grouped into four sections: <20%, 21-50%, 51-80%, and 81-100%.

The majority of courses (48, 54.6%) were in the 21-50% band, with the 31-40% band being the most frequently nominated band (23, 26.1%). The specific content proportion was also examined against the self-reported course types. As expected, the specialist courses contained the most specific content, with 9 (27.27%) of the specialist courses reporting 81-100% specific content. However, a large proportion (14, 42.42%) of specialist courses reported only 21-50% specific content. The general courses with majors were similar in make-up with 53-66% reporting 21-50% of specific content, 22-23% reporting 51-80% of specific content, and a small percentage reporting <20% of specific content and only one response in the 81-100% range for the Creative Industries/Arts courses with majors. Interestingly the one course that was self-reported as “Not a course with significant Interactive Media and/or Gaming content” reported 31-40% specific content (not shown in Figure 10.3 below).

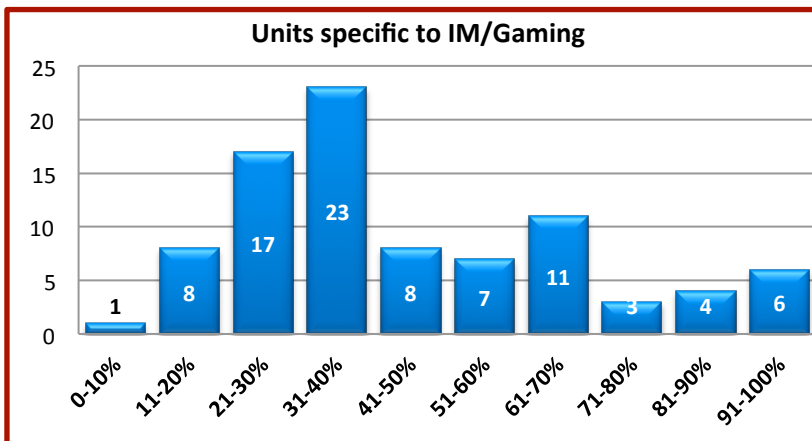


Figure 10.1

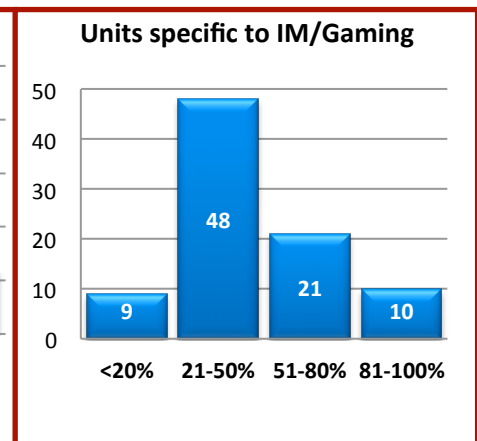
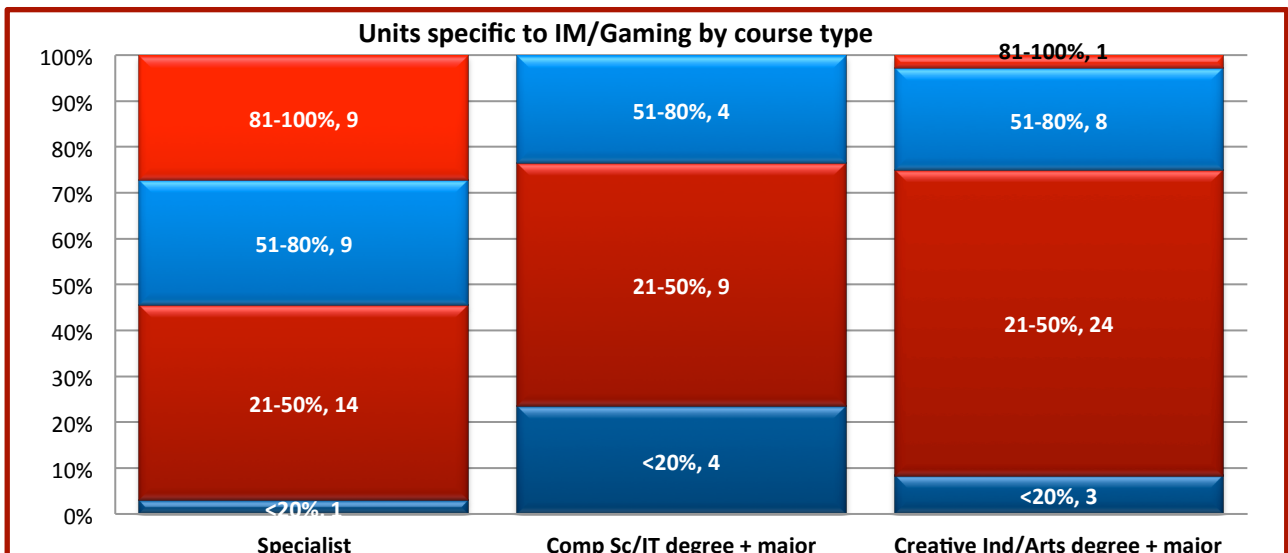


Figure 10.2



10.1 Nationally Recognised Training (NRT) Packages

There were interesting results when the data was compared against courses that are Nationally Recognised Training (NRT) packages. While each of the four NRT programs included have some room for electives and specialisation which could vary the proportion of specific interactive media/gaming content, the range of variation was quite wide¹⁴.

The Advanced Diploma of Screen and Media showed the highest amount of variation, ranging from the lowest band (0-10%) to the highest band (91-100%). The majority of responses were in the 31-40% band. The Diploma of Screen and Media varied between the 21-30% and 61-70% bands, with a fairly even distribution across the bands. The Diploma of Information Technology (Multimedia) ranged from the 11-20% band to the 81-90% band, with the majority of responses in the 11-20% band.

The Diploma of Interactive Media was the most noteworthy. This course is the most specialised of the NRT programs included. However, there was a wide range of responses from the 11-20% band to the 81-90% band. The majority of responses (more than 50%) were in the 31-40% band.

The figures below show the responses for each of the NRT programs with which band the responses were in, as well as the specialisation/major study where applicable. This clearly shows the lack of correlation between course type or course name to the proportion of interactive media or gaming content

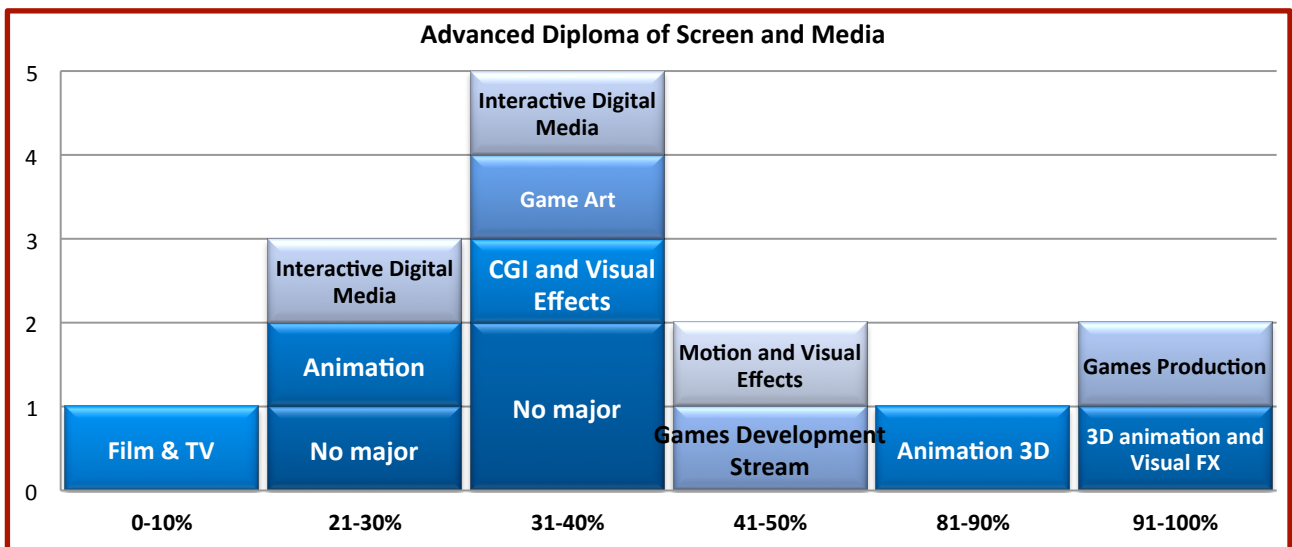


Figure 10.4

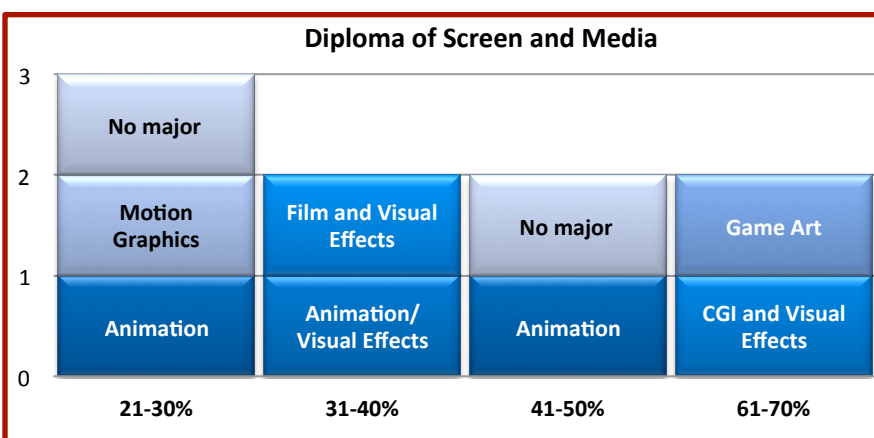


Figure 10.5

¹⁴ Refer to the individual qualification releases for further information about requirements for these NRT programs. Links are provided at the end of this report.

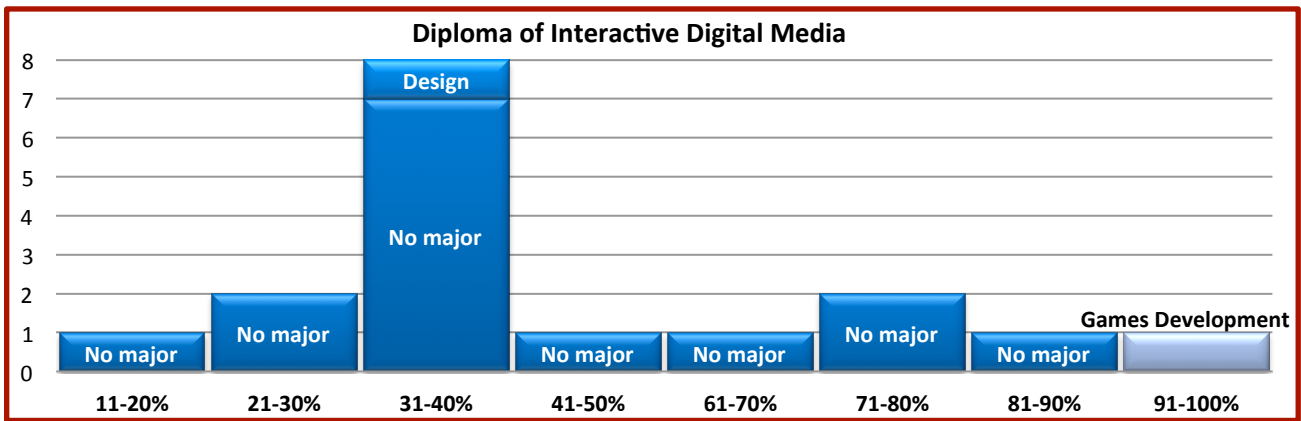


Figure 10.6

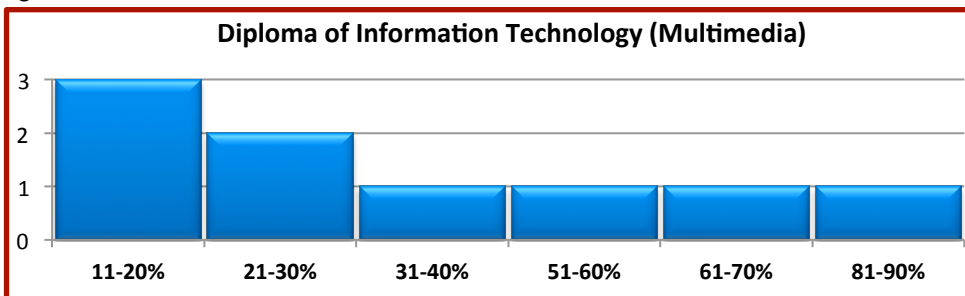


Figure 10.7

The issue of whether the NRT packages mentioned above are providing the skills and knowledge required for interactive media and gaming was included in the IBSA 2009 Review of the digital games development: Games Arts, Animation and Programming¹⁵. The IBSA review recommendations include:

*“...The current national qualifications in IBSA Training Packages do not satisfy current or future needs of the digital games development, 3D digital art, animation, or game programming needs. To give better coverage it is recommended a **Diploma in Digital Games Development and Interactive Applications** be developed...”*

“...Career pathways should be promoted that are broader than the games development sector by ensuring qualifications provide core competencies and elective streams allowing specialisation in vocational pathways that already exist or are emerging...”

“...promote articulation of graduates from these qualifications into further learning and work relating to the digital games development and 3D and interactive media vocational outcomes...”

IBSA, Review of the digital games development: Games Arts, Animation and Programming, December 2009, p. 34¹⁰.

As a result of the review, two new courses were released in 2011:

- ICA50211 - Diploma of Digital and Interactive Games (New – First release 18/7/2011.)
- ICA50911 - Diploma of Digital Media Technologies (New –First release 18/07/2011.)

These new courses appear to address the issues that the ISIS research found with regards to providing a more reliable nationally consistent curriculum at the specific level of interactive media and gaming.

¹⁵ Innovation & Business Skills Australia (IBSA) 2009, *Review of the digital games development: Games Arts, Animation and Programming*, December 2009
http://www.ibsa.org.au/Portals/ibsa.org.au/docs/reports/IBSA%20Final%20Report_GamesDevelopment_%20V1.2.pdf

11 Professional Learning and Experience

The way a course prepares students for employment in industry is through a combination of the specific skills and knowledge required to practice and professional learning strategies to give students exposure to the profession in the context of the industry. The ISIS curriculum research has a key interest in the way curriculum incorporates professional learning to prepare students for working in industry.

11.1 Professional Experience

The survey asked providers to indicate which types of professional experience were included in the curriculum and whether these activities were required or optional for students to undertake.

The following definitions of professional experience were used for the purpose of this research:

Industry placement:	<i>An internship or other work experience in industry. May be paid or unpaid.</i>
Industry project:	<i>A project for a real-world client organisation. May be individual or team based.</i>
Industry competition:	<i>Industry competitions involves industry running, judging, sponsoring or in some other way supporting or encouraging students, often in teams, to compete against each other to achieve a business-oriented goal in a short time frame. The participation in the competition may or may not be given credit towards the course.</i>
Industry simulation:	<i>Reality-based, experiential learning-centred approaches engaging students in real-time analysis and decision making in real-world situations within the safety of an educational environment. For example, a simulated work environment or projects for a simulated client. May also include in-depth industry case studies where students are given an actual industry scenario or challenge faced by industry requiring students to apply analytical and problem-solving skills to explore solutions and/or critically evaluate those made by industry professionals.</i>
Industry mentoring:	<i>Matching students with a professional role model who can offer expertise, model practice, share personal insights, and provide guidance and support. May be formal or informal and may only be available to select students (e.g. high performing students, part of a scholarship program).</i>
Industry Study Tour:	<i>Industry study tours include field trips, site visits and more lengthy tours. Industry study tours might last a day or a month and aim to create opportunities by travelling to industry-related places and situations, allowing students to apply theory, see theory in practice, ask questions of professionals in situ, compare and contrast different sites of work and connect curriculum and learning to professional practice. May include both local and overseas.</i>
Industry practitioner delivery:	<i>Industry practitioners engage in the teaching program to deliver specialised lectures, present in seminar series, conduct professional development workshops or participate in assessment of student projects and presentations. This may be included as part of a normal Unit of Study or a separate activity (e.g. lunch time seminar series or standalone professional development workshop) that may or may not be given credit towards the course.</i>

The majority of responses included at least one form of professional experience. The two most frequently cited forms were Industry placements (41, 23.3%) and Industry projects (35, 19.9%). There were 18 (10.2%) responses that did not select any professional experience options.

Respondents were asked to indicate whether professional experience was required or optional. Of the total responses, the majority indicated that it was optional (109, 62.0%).

The top three *required* professional experience types were:

- Industry project (16, 9.1%),
- Industry simulation (15, 8.5%), and
- Industry practitioner delivery (13, 7.4%).

The top three *optional* professional experience types were:

- Industry placement (31, 18.2%),
- Industry project (19, 10.8%), and
- Industry competition (19, 10.8%).

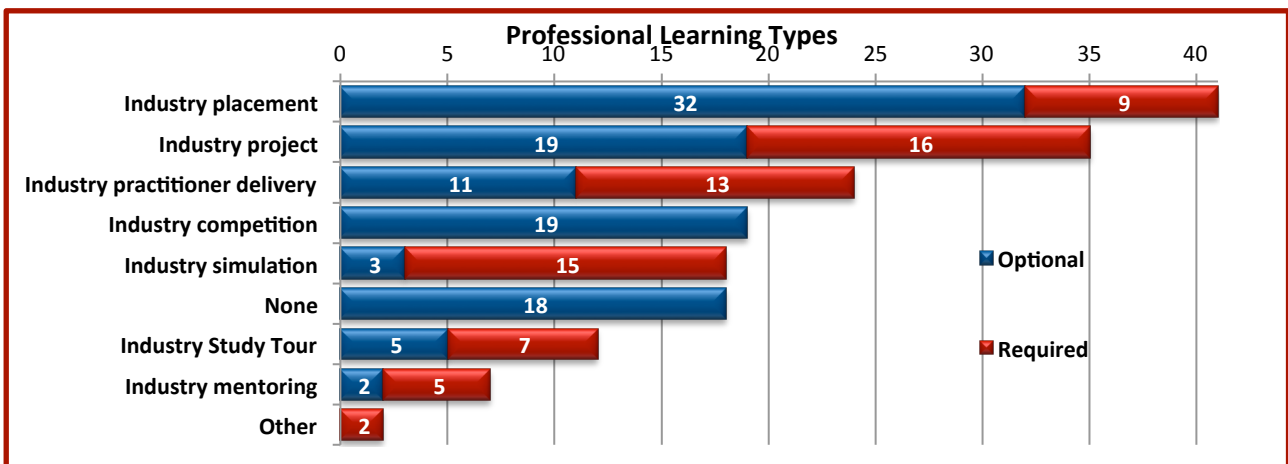


Figure 11.1

Industry placements have long been a standard option to provide students with professional experience within an industry setting. While industry placements can be highly beneficial for students, they require a great deal of effort in terms of organisation. This factor probably explains why most courses had optional placements. If completion of a placement is required in order to meet course requirements, the provider needs to be able to guarantee placements for every student. This can be managed by restricting enrolment numbers, but also relies on the availability of host organisations who can take the student. Another option is to have competitive entry to a limited number of placements.

Industry projects can be easier to manage. The project involves a real-world client and gives students (often in groups) the experience of working to a brief and liaising with a client. The students generally do this work on campus or at home rather than at the client organisation.

Universities were most likely to use industry placements in their courses (31.4% of University professional experience options). This may be due to organisational size and their having greater resources to manage placement programs than is the case for VET providers. It may also be because Bachelor degrees are longer (3-4 years) than Diplomas and Advanced Diplomas (1-1.5 years), which means there is more time in the course to accommodate a placement. The TAFEs and Private Providers primarily utilised Industry projects and Industry simulation. Involving Industry practitioners in the delivery of the course was most frequently found in the Private Provider responses.

When analysing total number of professional experience options the Specialist and Creative Industries/Arts courses had significantly higher responses than the IT/Computer Science courses. Specialist and Creative Industries/Arts courses listed industry placements as the most common form of professional experience while IT/Computer Science courses listed industry projects.

Tables showing the data for the professional experience responses are available in the [appendices](#).

11.2 Professional Learning Units

Professional Learning (also called Professional Practice), as distinct from Professional Experience, can be summarised as units of study that provide students with key information and knowledge about the profession and industry as well as useful supplementary knowledge that they will need in employment aside from the core skills of their profession. The survey asked providers to list any professional learning units in their course and list what type of unit it was and the focus area.

Types of professional practice subjects/units include:

- *Professional Practice* (subjects/units that cover relevant information and skills required to practice in the profession, provides information about the shape and nature of the industry etc.);
- *General Business Skills* (basics of management, accounting, HR practices, types of employment (salaried, sole trader, company), small business creation, entrepreneurship, innovation); and
- other relevant issues such as *Legal and IP Information* (Intellectual Property, Copyright, Contracts, and relevant aspects of the law for the profession).

These units may have a specific focus on *Interactive Media/Gaming* Industry, a broader focus on the *Computer/IT* or *Creative Industries/Arts* Industry, or be *General*, non-industry specific, in focus.

The number of professional learning units reported for each course ranged from 0-12, with an average of 2.3 units per course¹⁶. Of the different course types however, Diplomas had the highest average of professional learning units as a proportion of the total course units (35.4%). This was distinctly higher than the average proportion of professional learning units in Bachelor degrees (8.1%) and Advanced Diplomas (6.2%).

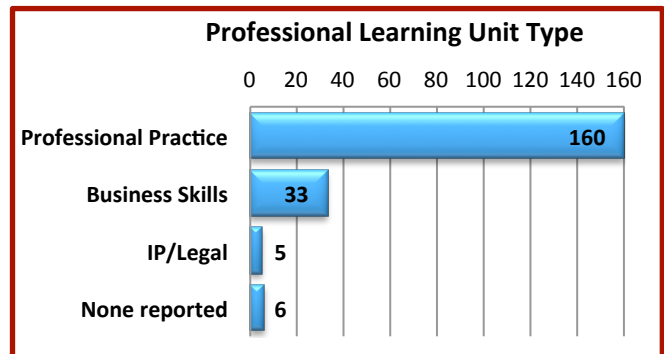


Figure 11.2

The most frequently reported professional practice subject/unit type was *Professional Practice* (78.4%), and the majority of these subjects/units were focused specifically on the *Interactive Media/Gaming* Industry. The majority (46.6%) of the professional units reported were focused specifically on the *Interactive Media/Gaming* Industry. Only 6 responses (3.0%) did not report any professional practice subjects/units in their course.

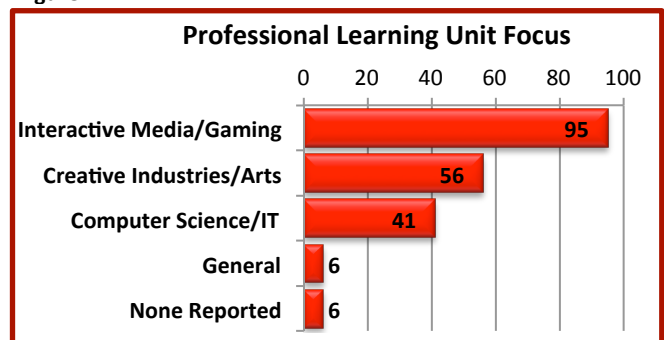


Figure 11.3

Professional Practice was the most frequently reported type of subject/unit for both Universities and Private Providers. TAFE respondents reported a majority of *Professional Practice* units but also had significantly more *General Business Skills* units than the other provider types. *Professional Practice* was also the most frequently reported across all the course types. Respondents from the specialist courses reported slightly more *Professional Practice* units with a specific focus on *Interactive Media/Gaming* than the more general courses, however all course types reported a similar number of total *Professional Practice* units.

The survey responses appear to support the growing interest in incorporating professional learning or work-integrated learning into the curriculum.

¹⁶ Note that due to the differences in how units are represented across different course types, average total course units were used for this calculation. The tables showing the averages used are included in the appendices.

12 Graduate outcomes

Graduate outcomes are an important success indicator for any course. In the case of Interactive media and gaming, information on graduate outcomes would be especially significant in light of recent research¹⁷ that indicated a strong industry perception that recent graduates were unsuitable for employment because they were weak in several key skills and lacked relevant knowledge. The ISIS education stream sought information on how many graduates from interactive media and gaming courses actually gained employment in the interactive media and/or gaming industry. Survey 2 asked respondents a number of questions related to graduate outcomes.

12.1 Graduate Employment in the Interactive Media and/or Gaming Industry

The survey asked if providers had any data on the employment of their graduates (e.g. through a graduate survey or similar). The survey also asked, in the absence of reliable data, how many of their graduates respondents thought were employed in the interactive media and/or gaming industry. In both cases, respondents were asked to select a broad percentage band (or indicate if the data was unavailable or if the course has not had any graduates yet).

Only 13 courses in the responses had any actual graduate data. This was expected as most institutions struggle to obtain solid data on graduate employment outcomes. Broad surveys, such as the Australian Graduate Survey (AGS)¹⁸, often do not provide sufficient detail to get a clear picture of graduate outcomes at the specific level of interactive media and gaming. These surveys are also a snapshot at a single point in time - generally administered within months of completion, and too soon for many graduates in this field to have secured employment. AGS surveys do not provide information about graduate employment over longer time periods.

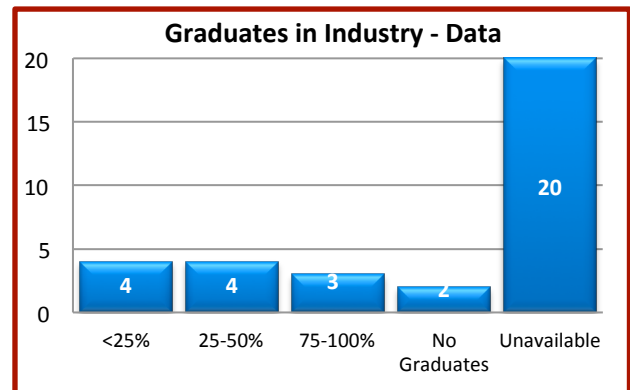


Figure 12.1

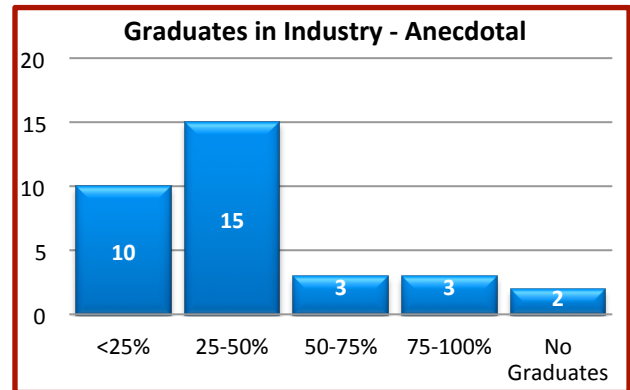


Figure 12.2

As it was anticipated that actual graduate employment data would be scarce, the survey also asked providers to give their best guess on how many of their graduates are employed in the interactive media/gaming industry. These anecdotal responses show the majority of providers (25, 75%) believe that under 50% of their graduates are employed in the industry. Only 3 thought that their 75-100% of graduates gained employment in the industry.

12.2 Graduate Expectations

Some Australian interactive media/gaming courses are promoted strongly as providing for a career in interactive media and/or gaming. The ISIS research sought information on the extent to which promotional material was giving students a realistic expectation of employment opportunities for graduates.

¹⁷ Haukka, S, 2011, *Australia's Digital Games Industry Consolidation Report*, <http://www.cci.edu.au/content/gisp>

¹⁸ The Australian Graduate Survey (AGS) is the national census of newly qualified higher education graduates, administered by the Graduate Careers Council of Australia (GCCA) in association with Australian higher education institutions. <http://www.graduatecareers.com.au/Research/Surveys/AustralianGraduateSurvey/index.htm>

The survey asked providers to select one of four statements that they felt best described what a prospective student could expect on completing their course. The four options are presented below.

On completion of this course students will:

1. be able to gain employment in the interactive media and gaming industry without much difficulty.
2. be qualified to gain employment in the interactive media and gaming industry, but should be aware that jobs in Australia are limited and highly competitive.
3. have some grounding in interactive media and gaming, however they may need further education/training/experience to develop the specific skills needed to enter the interactive media and gaming industry.
4. have a good foundation in a broader discipline (IT, Creative Industries), but will not have covered enough specific interactive media/gaming content to expect employment in an interactive media/gaming role. Students should be able to find employment in their main discipline without much difficulty.

The majority of the responses agreed with Statement 2 that students would be “be qualified to gain employment in the interactive media and gaming industry, but should be aware that jobs in Australia are limited and highly competitive”. This statement is consistent with a number of the comments made in the graduate feedback section about the difficulty of entering the industry due to limited jobs. It is, however, difficult for providers to test their judgement that graduates would be well qualified to gain employment in the absence of actual graduate employment data and graduate feedback.



Figure 12.3

12.3 Graduate Feedback

To the extent that it is available, graduate feedback can be important in evaluating the curriculum. However, once students have graduated, there is often little incentive for them to keep in touch and provide feedback. The survey asked respondents if they had received any feedback from graduates (e.g. via alumni surveys or graduates keeping in touch with staff). The responses indicated that two thirds of providers (66.7%) had received some feedback. (A third of responses indicated they had received no feedback from graduates.)

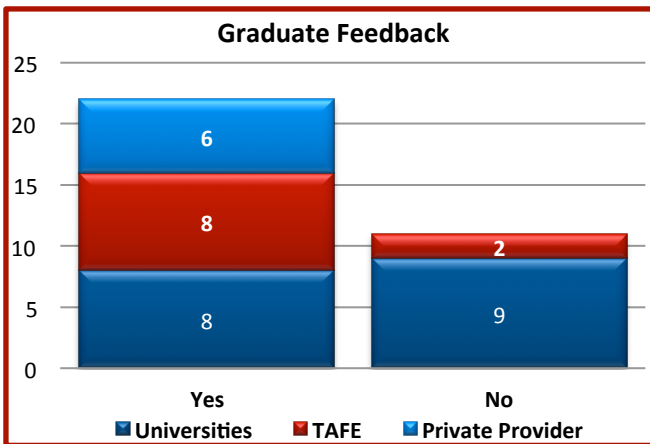


Figure 12.4

Where feedback had been received, providers were asked to give an indication of the sort of feedback they had received. A sample of the responses is included below:

Sydney has limited opportunities, but regular employment is readily available in the more broader field of digital media (e.g. web design). Some students have become freelancers, entrepreneurs or relocated to Melbourne or Brisbane. International Students have generally done well finding employment in their home country.

Majority gain some form of work in preferred area with some gaining full-time employment immediately after graduating. Extent of work varies from student to student.

Obviously it is a tough industry to enter (particularly in the last 18 months) but I believe our graduates are well prepared for industry and some have been successful in obtaining positions.

Graduates often find the realities do not match the perceived notion of the Industry – eg hours worked, mismanagement of projects, and negative impact on family.

Payment of invoices as a freelancer is often difficult

Continuity of work [is an issue]

Graduates have found that the area is very competitive and they do not seem to be very persistent in finding employment within the Games area – a couple of knock-backs usually stops them.

Portfolios are seeming to be of importance in acquiring employment

It is extremely difficult to get work in the gaming industry. Students must be able to show initiative and experience in game development endeavours outside of the university curricular

Our graduates go on to a range of careers, from management consulting to advertising and marketing to interaction design firms. In all these jobs, they work on interaction design projects even if the company's main business is not interactive media per se.

Some do higher ed and others are doing self-starting Industry projects

Most have found it [getting into the industry] very hard and have gone onto further study

The comments indicated a few common themes:

- The industry is very difficult to enter with limited number of jobs available, which combined with a lack of continuity of work creates job uncertainty.
- Students are finding the realities of the industry do not meet their expectations, with long hours, high workloads, payment of invoices, and project management issues cited as negative issues.
- Students need to be prepared to do more than just what is in their course in order to learn further skills and develop a portfolio of work if they want to be competitive. They also need to be persistent and not expect to get the first few jobs they apply for and be prepared to relocate if necessary.
- Some students are going on to further study if they are unsuccessful in gaining employment after completing their first course.
- There are other employment options available that include some interactive media and/or gaming skills, but are not specifically interactive media/gaming positions.

A number of these themes indicate areas where there may be potential gaps in the curriculum or room for improvement. These include:

- Providing a realistic picture of the industry, including the size of the industry in Australia, where most of the work is concentrated, how competitive it is to get work, and an overview of the industry overseas.
- Providing more information on what it is like to work in the industry, including awareness of areas such as the difference between being a salaried employee and working as a contractor (sole trader), contract agreements, invoicing, small business management, tax basics, work rights, negotiating and dealing with conflicts, and self-management.
- Putting more focus on the importance of a portfolio to showcase work. Providing as many opportunities as possible for students to build a portfolio of work throughout their course and encouraging students to create portfolio work in addition to that required for the course.
- Being upfront about what key skills and knowledge are not covered by the course and where students may be able to learn these (e.g. other courses, online modules, professional development programs).

The feedback also highlights the priority that should be given to ensuring a balance between the academic content to develop skills and expertise and the practical knowledge of the industry.

13 Curriculum review and development

Formal reviews are a key mechanism for curriculum development; this is especially the case where external industry input is sought. The frequency of reviews is significant because the industry is fast-evolving and volatile. Many course providers will have on-going and/or informal mechanisms in place that ensure incremental improvement. But the formal processes are likely to include broader consultation an input, high-level institutional scrutiny and can lead to significant changes in content and delivery.

Survey 2 asked a series of questions on the formal curriculum review and development processes. These included the frequency of curriculum review, both internal reviews and reviews that involved external input. The frequency of review is an important factor when considering how responsive curriculum development is to changes in the industry. The other questions looked at the ways providers engage with the interactive media/gaming industry when developing and reviewing curriculum, as well as whether they engage with other academic units within their own organisation (e.g. cross discipline involvement).

Curriculum review frequency varies. Figure 13.1 shows the curriculum review frequency for internal and external reviews.

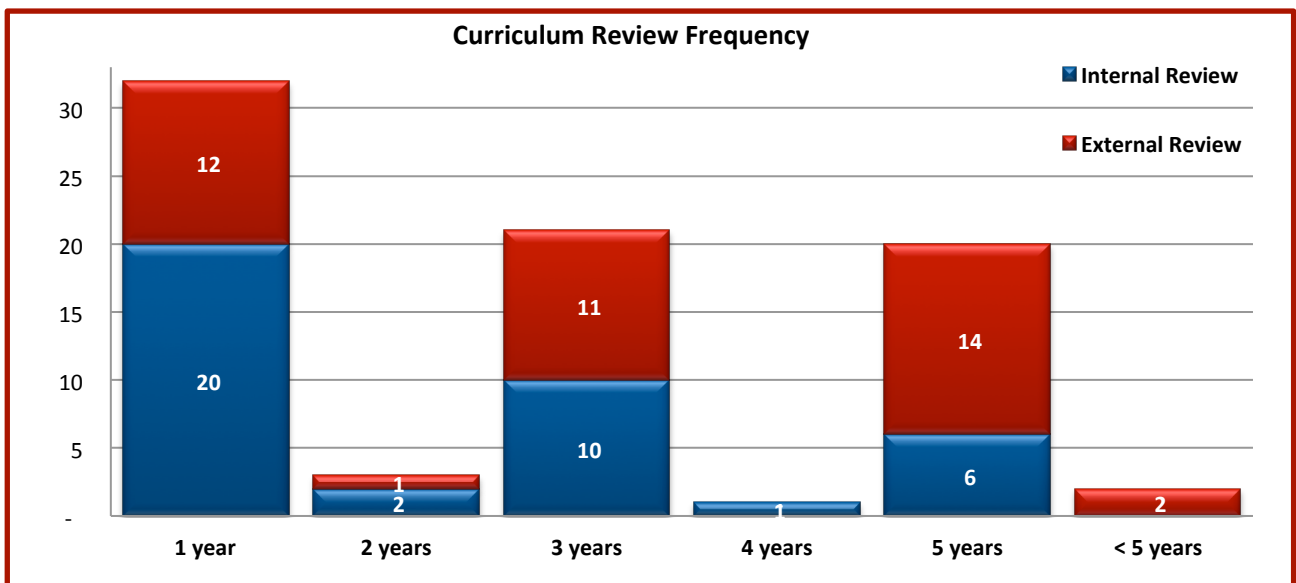


Figure 13.1

13.1 Internal Curriculum Review

Internal curriculum reviews are usually conducted on a more frequent basis than external reviews and serve as a regular check that the course is running well and can lead to minor adjustments. The frequency of internal curriculum reviews varied from 1 to 5 years for the courses covered by responses. Private Providers were the most consistent and reported annual internal reviews. TAFEs had either annual or 3 yearly internal reviews. The Universities (including dual sector providers) showed the greatest amount of variance, with internal reviews ranging from 1 to 5 years. Internal review frequency was fairly evenly spread across annually, 3 yearly, and 5 yearly.

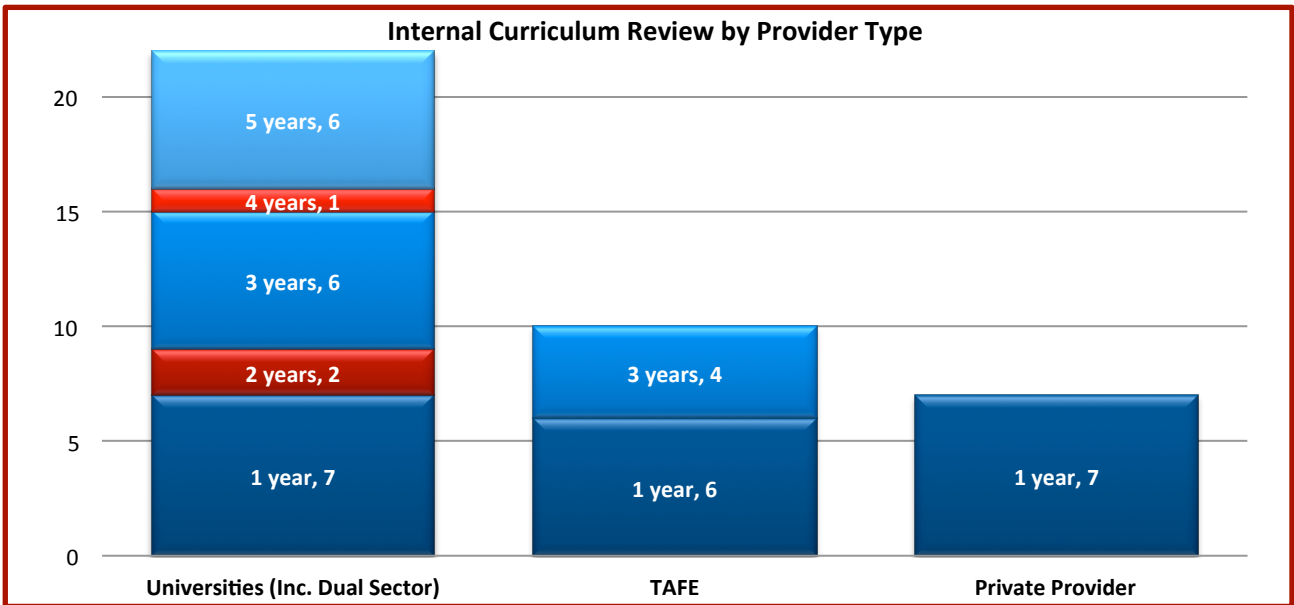


Figure 13.3

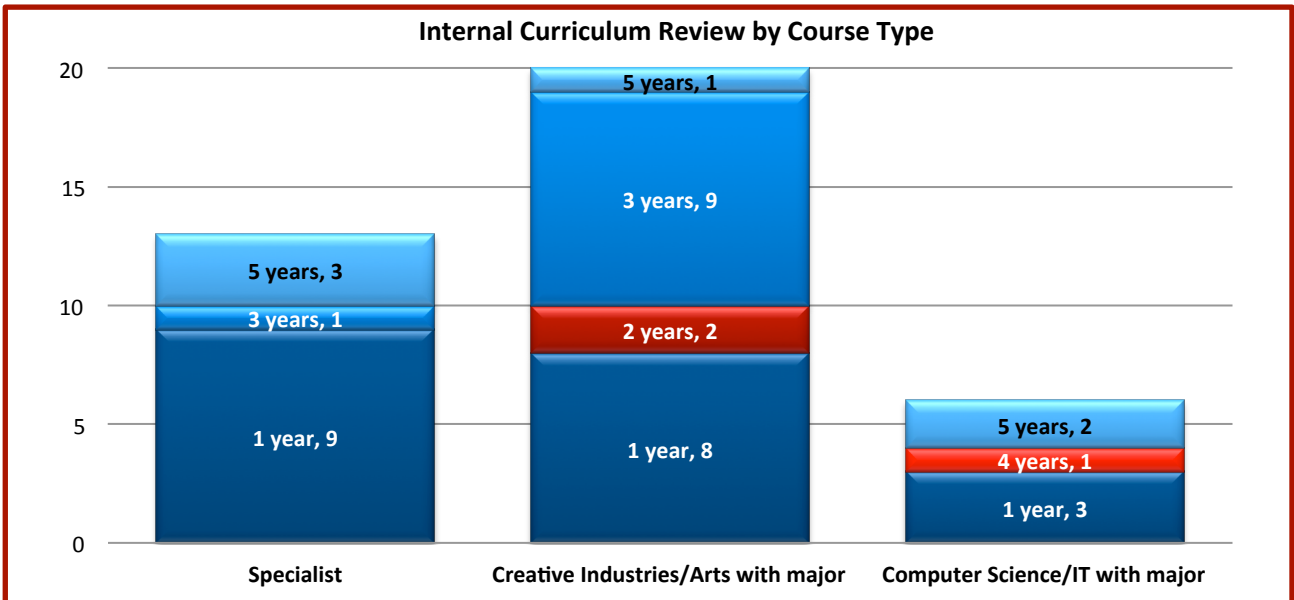


Figure 13.2

13.2 Engagement with other Faculties/Departments

Aside from providing specific content focused on interactive media and/or gaming knowledge and skills, courses often need to provide complimentary skills that will enable students to succeed in the industry. This can include areas of study outside of the Faculty/Department that offers the course. Examples of cross-discipline study areas include:

- Business/Commerce - Basic management, marketing, and accounting. Information on business models, especially small business and contracting as a sole trader.
- Law/Legal studies - Intellectual Property, Contracts, etc..
- Creative Arts/Industries - Artistic and design basics if the course is mostly computer science/IT focused
- Computer Science/ IT - computing basics if the course is mostly creative arts/design focused
- Arts/Media/Communications - Social science areas such as impact of interactive media and gaming on society and culture, ethics, etc..

The survey asked providers to indicate which other Faculties/Departments they engaged with as part of their curriculum design and review processes. The Creative Industries/Creative Arts area was the most common (23, 33.82%), followed by Arts/Media (18, 26.47%) and IT/Computer Science (17, 25%). Interestingly just over 10% of responses didn't indicate any engagement with other faculties. A small number included Business/Commerce (4.41%), and none of the respondents indicated engagement with Law/Legal Studies. Note that this does not mean that the courses do not include units or subjects offered by other departments, it indicates only whether other departments are involved in the review and development of the curriculum.

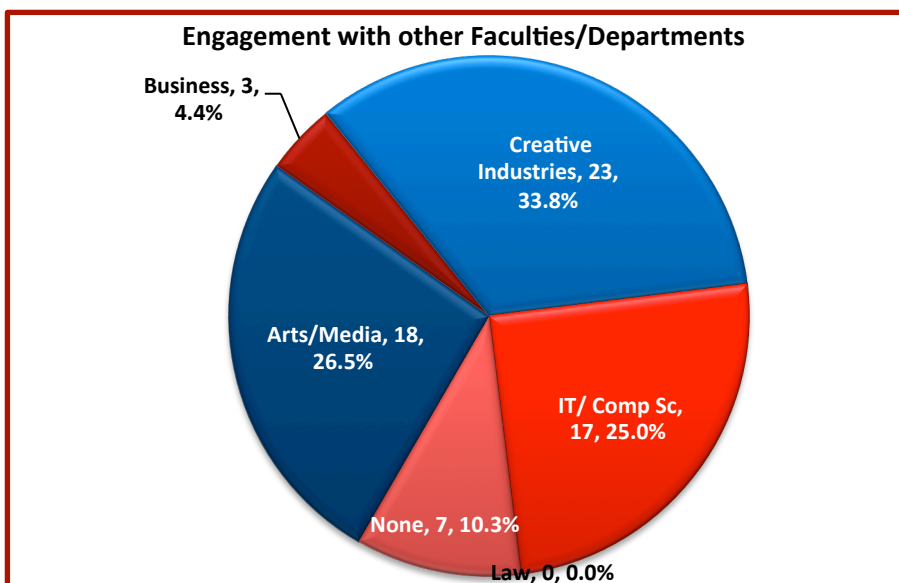


Figure 13.4

When compared against provider type and course type, the Universities had the highest level of consultation with other academic units (58.8%), consulted across a wider variety of academic units, and were the only provider type to include Business/Commerce units. The level of consultation across course types was fairly even for the specialist and creative industries courses, but lower for the IT/Computer Science courses.

13.3 External Curriculum Review Frequency

External curriculum reviews are usually designed to engage with people and organisations external to the education provider who have expertise that is relevant to the course being reviewed. This is the most common formal method of engagement with industry for the purpose of curriculum review and development.

As shown earlier, curriculum review frequency varies between providers. Private Providers were the most consistent and reported annual external reviews. TAFEs varied between annually and longer than 5 yearly (with the average being 3 yearly). However it should be noted that National Recognised Training programs are reviewed regularly by the relevant industry skills association, which provides the function of an external review. The Universities (including dual sector providers) showed the greatest amount of variance, ranging from some annual and 3 yearly external reviews to the majority of external reviews 5 years or longer apart.

This may imply that many universities are not formally seeking external input on the curriculum of their interactive media and gaming courses. In an industry that can change so quickly, this puts them at risk of having courses that may be out of touch with the current industry. However course providers may engage with industry through other mechanisms on a one-off or on-going basis. For example, professional practitioners may be contributing to the teaching as lecturers or guests; lecturers and teachers may also be working as games developers or interactive media experts; companies may partner with academics on research and R&D projects; and/or courses or academic units may have external advisory boards or link up with industry networks. Nevertheless, it is frequently through reviews that major course changes are approved and implemented.

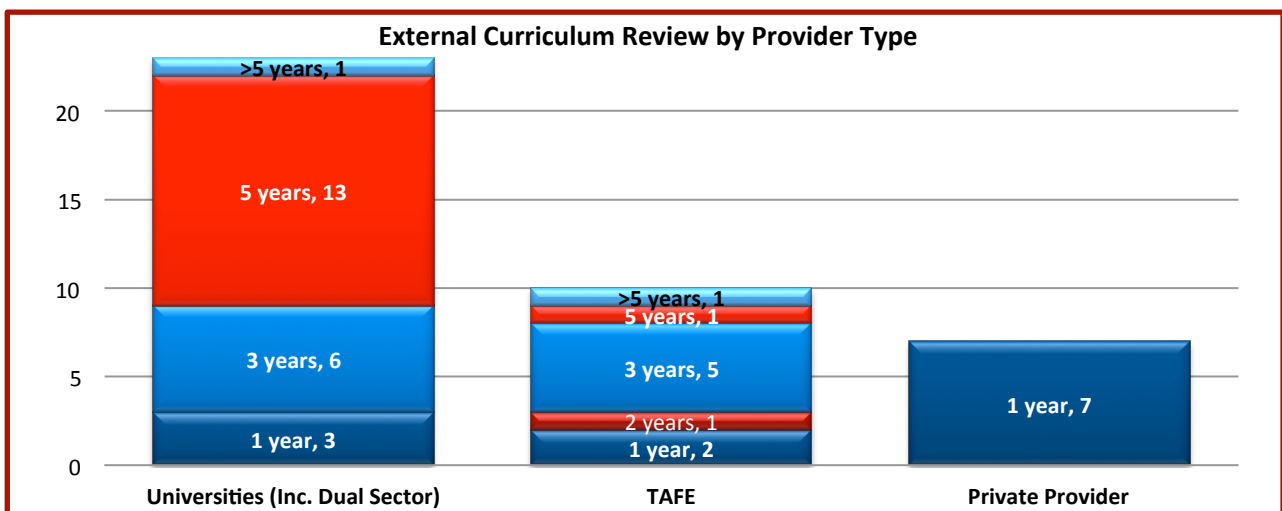


Figure 13.6

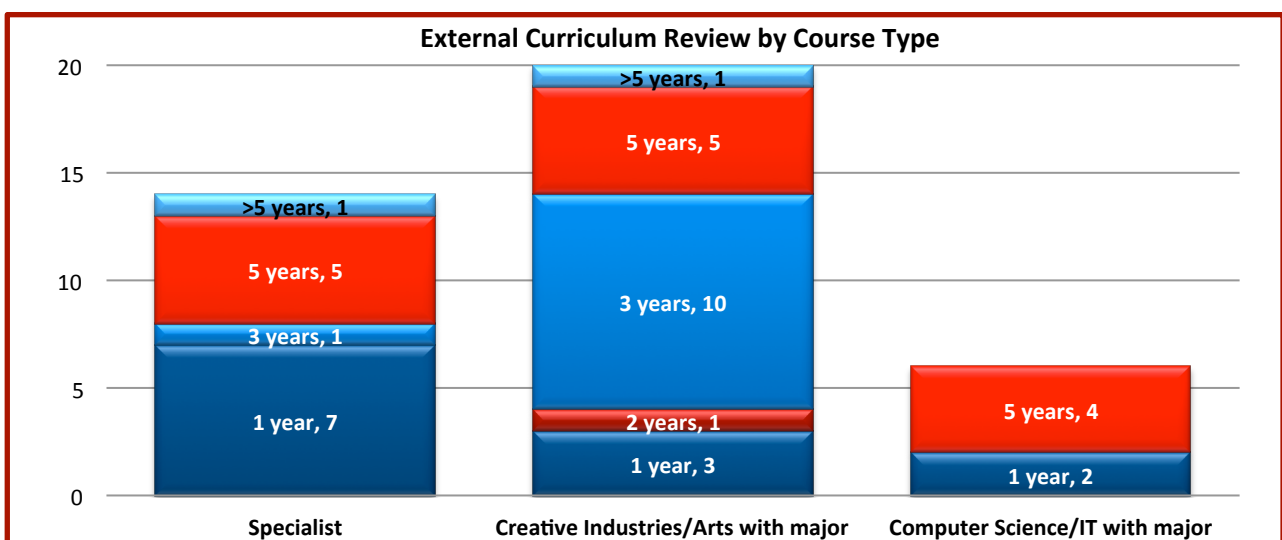


Figure 13.5

13.4 Engagement with Industry

The survey invited respondents to identify the mechanisms through which they engaged with industry in reviewing and developing courses. The forms of industry engagement that the survey specified included:

- Inclusion of an interactive media/gaming industry professional on a specific curriculum review committee
- Inclusion of an interactive media/gaming industry professional on a standing Faculty Advisory Committee or similar
- Consultation with [interactive media/gaming associations and related agencies](#), including Government agencies or initiatives.
- Consultation with [companies or individuals](#) in the Interactive Media or Gaming Industry
- Inclusion of a broader industry (e.g. Computer Science/IT, Creative Industries) professional on a specific curriculum review committee
- Inclusion of a broader industry (e.g. Computer Science/IT, Creative Industries) professional on a standing Faculty Advisory Committee or similar
- Consultation with [broader industry \(e.g. Computer Science/IT, Creative Industries\) associations](#)
- Other

Lists of interactive media/gaming associations, companies and individuals, and broader industry associations can be found in the appendices.

The survey responses showed that the most frequently employed form of engaging with industry on curriculum review was to have an interactive media or gaming professional on the curriculum review committee (23 respondents representing 24.2% of all respondents). The next most frequently cited form was consulting with interactive media or gaming companies (20, 21.1%), then having an interactive media or gaming professional on a Faculty advisory committee (14, 14.7%) and consulting with interactive media or gaming associations (11, 11.6%). Of the interactive media and gaming associations, the most frequently listed in the survey responses was Games Developers' Association of Australia (GDAA).

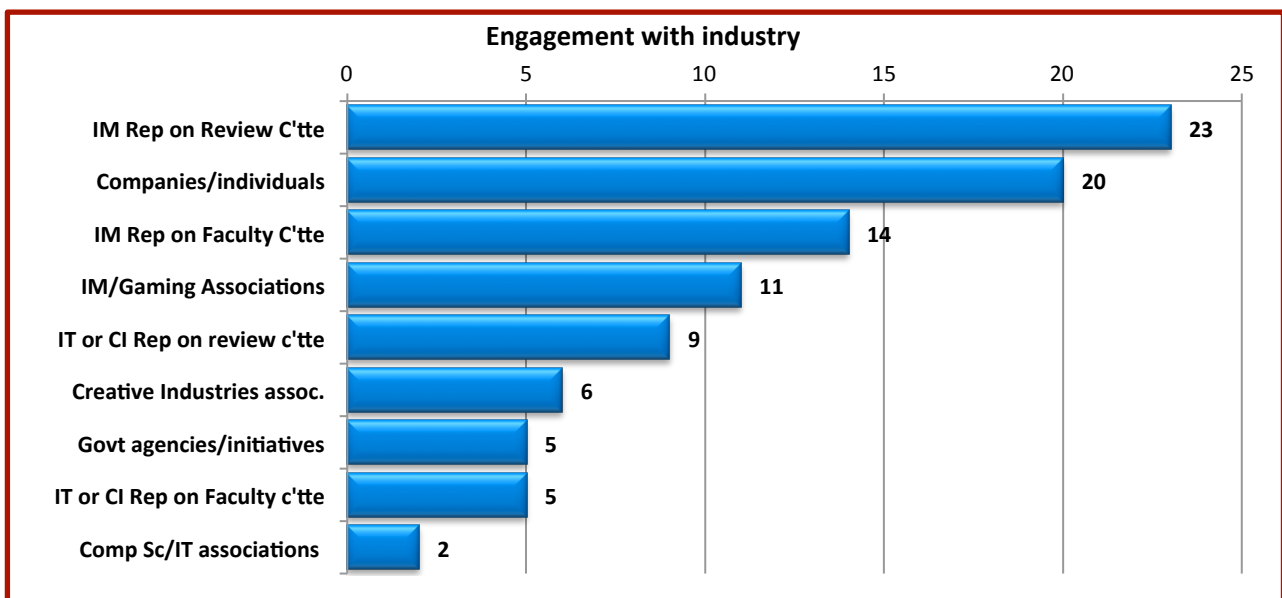


Figure 13.7

There were 21 interactive media/gaming companies mentioned explicitly in the survey responses and 10 responses did not specify the names of the company. The most frequently mentioned company was Team Bondi (7, 14.0%), which was placed into administration in August 2011. Two other companies listed in the survey responses, Krome Studios and THQ Australia, also closed in 2010/2011.

The frequency of external curriculum review correlated with the number of types of industry engagement used. Those providers who reported that they conducted external curriculum reviews annually also reported significantly more forms of industry engagement used in curriculum review and development process overall than those providers who reviewed their curriculum less frequently.

Universities were most likely to have an interactive media or gaming professional on a curriculum review committee. The private providers had the highest level of engagement with the interactive media and gaming industry in general through a mix of interactive media and gaming companies, associations, professionals on committees.

The specialist course types showed the highest level of industry engagement (51.6% of all industry engagement reported was for specialist courses). This is to be expected as the curriculum review of more general courses would require a broader focus. However, it is important that any major studies or specialisations within a general course are included in a curriculum review and in the case of an external curriculum review this should include engagement with the relevant industry.

14 Documents and publications

Haukka, Sandra, (May 2011), *The Working in Australia's Digital Games Industry: A Consolidation Report*, Australian Research Council Centre of Excellence for Creative Industries and Innovation (CCI) and Queensland University of Technology in partnership with the Games Developers' Association of Australia, <http://www.cci.edu.au/sites/default/files/shaukka/Working%20in%20Australia%27s%20Digital%20Games%20Industry%20Consolidation%20Report%20May%202011.pdf>

Innovation & Business Skills Australia (IBSA) 2009, *Review of the digital games development: Games Arts, Animation and Programming*, December 2009
http://www.ibsa.org.au/Portals/ibsa.org.au/docs/reports/IBSA%20Final%20Report_GamesDevelopment_%20V1.2.pdf

International Games Developers Association (IDGA) 2008, *IGDA Curriculum Framework: The Study of Games and Game Development*, Version 3.2 beta, February 2008,
<http://wiki.igda.org/images/e/ee/Igda2008cf.pdf>

Multimedia Victoria 2003, *Game Plan: Game On. A Blueprint for Growing the Victorian Computer Game Industry*, February 2003,
<http://gamesindustryskills.files.wordpress.com/2009/11/victoria-gameonfeb2003.pdf>

National Centre for Vocational Education Research (NCVER) 2011, *VET and the diffusion and implementation of innovation in the mining, solar energy and computer games sectors*, NCVER monograph series 06/2011
<http://www.ncver.edu.au/publications/2392.html>

Nationally Recognized Training (NRT) package

[Release 1 CUF60107 Advanced Diploma of Screen and Media](#)

<http://training.gov.au/TrainingComponentFiles/Release%201%20CUF60107%20Advanced%20Diploma%20of%20Screen%20and%20Media.pdf>

[Release 1 CUF50107 Diploma of Screen and Media](#)

<http://training.gov.au/TrainingComponentFiles/Release%201%20CUF50107%20Diploma%20of%20Screen%20and%20Media.pdf>

[Release 1 ICA50905 Diploma of Information Technology \(Multimedia\)](#)

[http://training.gov.au/TrainingComponentFiles/Release 1 ICA50905 Diploma of Information Technology \(Multimedia\).pdf](http://training.gov.au/TrainingComponentFiles/Release%201%20ICA50905%20Diploma%20of%20Information%20Technology%20(Multimedia).pdf)

[Release 1 CUF50207 Diploma of Interactive Digital Media](#)

[http://training.gov.au/TrainingComponentFiles/Release 1 CUF50207 Diploma of Interactive Digital Media.pdf](http://training.gov.au/TrainingComponentFiles/Release%201%20CUF50207%20Diploma%20of%20Interactive%20Digital%20Media.pdf)

14.1 Government agencies and information

Organisation	Website
Australian Skills Quality Authority	http://www.asqa.gov.au/
Film Victoria	http://film.vic.gov.au/
HEIMSHHELP	http://heimshelp.deewr.gov.au/sites/heimshelp/
Innovation & Business Skills Australia (IBSA)	http://www.ibsa.org.au/Default.aspx
Multimedia Victoria	http://www.mmv.vic.gov.au/
National Centre for Vocational Education Research (NCVER)	http://www.ncver.edu.au/
Training.gov.au	http://training.gov.au/

14.2 Interactive media/gaming associations and related organisations

Organisation	Website
Australian Interactive Media Industry Association (AIMIA)	http://www.aimia.com.au/
Games Developers' Association of Australia (GDAA)	http://gdaa.com.au/
Interactive Games & Entertainment Association (iGEA)	http://www.igea.net/
International Game Developers Association (IGDA)	http://www.igda.org/
Queensland Games	http://www.queenslandgames.com/home
tsume - Australian and New Zealand game development	http://www.tsume.com/

14.3 Broader industry associations

Organisation	Website
Association for Computing Machinery	http://www.acm.org/
Australian Cinematographers Society	http://www.cinematographer.org.au/
Australian Computer Society	http://www.acs.org.au/
Australian Network for Art and Technology	http://www.anat.org.au/
IEEE Computer Society	http://www.computer.org/
Screen Producers Association of Australia (SPAA)	http://www.spaa.org.au/
Visual Effect Society	http://www.visualeffectssociety.com/

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Complete list of provider and course websites

Provider	Course name	Major or Specialisation	Website
Academy of Information Technology Pty Ltd	Advanced Diploma of Screen and Media	Games Production	http://www.academyit.nsw.edu.au/PDF/CUF60107.pdf
	Diploma of Information Technology	Multimedia	http://www.academyit.nsw.edu.au/PDF/ICA50905.pdf
	Diploma of Interactive Digital Media		http://www.academyit.nsw.edu.au/PDF/CUF50207.pdf
Academy of Interactive Entertainment	Advanced Diploma of Professional Game Development	Art	http://www.aie.edu.au/courses/game_art_and_design/GameArtAndDesign_specialising_in_art
	Advanced Diploma of Professional Game Development	Software Development	http://www.aie.edu.au/courses/game_programming/advance_diploma_pro_game.html
	Advanced Diploma of Screen and Media	3D animation and Visual FX	http://www.aie.edu.au/courses/3d_animation_for_film_tv/ad_dip_screen_vfx.html
	Bachelor of Games and Virtual Worlds	Programming	http://www.aie.edu.au/courses/game_programming/bach_of_games.html
Australian National University	Bachelor of Digital Arts		http://studyat.anu.edu.au/programs/3022XBDA;overview.html
Billy Blue College of Design	Associate Degree of Applied Design	Digital Media	http://www.billyblue.com.au/courses/digital-media-design/bachelor-of-applied-design
	Bachelor of Applied Design	Digital Media	http://www.billyblue.com.au/courses/digital-media-design/bachelor-of-applied-design
Bond University	Bachelor of Computer Games		http://bond.edu.au/degrees-and-courses/undergraduate-degrees/list/bachelor-of-computer-games/index.htm?&fos=Computer%20Games&cl=Your%20Degree
	Bachelor of Multimedia Design		http://bond.edu.au/degrees-and-courses/undergraduate-degrees/list/bachelor-of-multimedia-design/index.htm?&fos=Multimedia%20Design&cl=Your%20Degree
Box Hill Institute of TAFE	Advanced Diploma of Screen and Media	Motion and Visual Effects	http://www.bhtafe.edu.au/courses/local/Pages/MDA65.aspx
	Diploma of Screen and Media	Motion Graphics	http://www.bhtafe.edu.au/courses/local/Pages/MDA66.aspx
Canberra Institute of Technology	Advanced Diploma of Design	Digital Media	http://www.cit.act.edu.au/future/courses/digital_media_certificate_iv_and_advanced_diploma
	Advanced Diploma of Screen and Media	Animation 3D	http://www.cit.act.edu.au/future/courses/animation_3d_certificate_iv_and_advanced_diploma

	Bachelor of Games and Virtual Worlds	Programming	http://www.cit.act.edu.au/future/courses/games_and_virtual_worlds_programming_degree
	Diploma of Information Technology	Multimedia	http://www.cit.act.edu.au/future/courses/information_technology_multimedia_certificate_iv_and_diploma
Central Institute of Technology	Advanced Diploma of Animation		http://www.central.wa.edu.au/courses_careers/Pages/Courses.aspx?tpId=260513
	Diploma of Interactive Digital Media		http://www.central.wa.edu.au/courses_careers/Pages/Courses.aspx?tpId=231026
	Diploma of Interactive Games Development	Games Programming	http://www.central.wa.edu.au/courses_careers/Pages/Courses.aspx?tpId=263330
	Diploma of Interactive Games Development	Technical Art	http://www.central.wa.edu.au/courses_careers/Pages/Courses.aspx?tpId=263327
	Diploma of Screen and Media	Animation	http://www.central.wa.edu.au/courses_careers/Pages/Courses.aspx?tpId=232151
Central Queensland University	Bachelor of Digital Innovation		http://handbook.cqu.edu.au/Handbook/programs_1.jsp?code=CG30
	Bachelor of Multimedia Studies	Multimedia Studies	http://handbook.cqu.edu.au/Handbook/programs_3.jsp?s=3&code=CU23
Charles Darwin University	Bachelor of Creative Arts and Industries	New Media Design	http://stapps.cdu.edu.au/pls/apex/f?p=100:31:4449009298802443::NO::P31_SEARCH_COURSE,P31_SEARCH_YEAR,P31_SEARCH_VERSION:BCAINM,2011,2
Charles Sturt University	Bachelor of Arts	Animation and Visual Effects	http://csu.edu.au/courses/undergraduate/arts_animation_visual_effects/course-overview
	Bachelor of Computer Science	Games Programming	http://www.csu.edu.au/courses/undergraduate/computer_science/course-overview
	Bachelor of Computer Science	Games Technology	http://csu.edu.au/courses/undergraduate/computer_science_games/course-overview
Chisholm Institute of TAFE	Advanced Diploma of Screen and Media		http://www.chisholm.edu.au/Microsites/CSA_DesignMultimediaArts/CourseInformation/sm/Pages/default.aspx
Curtin University of Technology	Bachelor of Arts	3D Design	http://handbook.curtin.edu.au/courses/31/311935.html
	Bachelor of Arts	Digital Design	http://handbook.curtin.edu.au/courses/31/311950.html
	Bachelor of Arts (Mass Communication)	Multimedia	http://courses.curtin.edu.au/course_overview/undergraduate/multimedia
Deakin University	Bachelor of Film and Digital Media		http://deakin.edu.au/future-students/courses/course.php?course=A358&stutype=local&keywords=media

	Bachelor of Information Technology	Games Design and Development	http://www.deakin.edu.au/current-students/courses/course.php?course=S333&version=2&year=2010&keywords=games
	Bachelor of Interactive Media		http://www.deakin.edu.au/current-students/courses/course.php?course=A365&version=1&year=2010&keywords=interactive
Edith Cowan University	Bachelor of Computer Science	Games Programming	http://handbook.ecu.edu.au/CourseStructure.asp?disyear=2010&CID=649&USID=0&Ver=5.01&HB=HB&SC=UG
	Bachelor of Creative Industries	Game Design and Culture	http://handbook.ecu.edu.au/CourseStructure.asp?disyear=2010&CID=971&USID=1766&Ver=6&HB=HB&SC=UG
	Bachelor of Creative Industries	Interactive Media Development	http://handbook.ecu.edu.au/CourseStructure.asp?disyear=2010&CID=971&USID=1766&Ver=6&HB=HB&SC=UG
	Bachelor of Science	Digital Media	http://handbook.ecu.edu.au/CourseStructure.asp?disyear=2010&CID=140&USID=0&UCID=0&UID=0&Ver=10&HB=HB&SC=UG
Flinders University of South Australia	Bachelor of Creative Arts	Digital Media	http://www.flinders.edu.au/courses/undergrad/bca-digital-media/digital-media_home.cfm
	Bachelor of Science	Computing and Digital Media	http://www.flinders.edu.au/courses/undergrad/bccdm/bccdm_home.cfm
Gold Coast Institute of TAFE	Diploma of Interactive Digital Media		http://www.goldcoast.tafe.qld.gov.au/cis/index.php?script_name=coursedetails&course_id=3348
	Diploma of Screen and Media		http://www.goldcoast.tafe.qld.gov.au/cis/index.php?script_name=coursedetails&course_id=3347
Griffith University	Bachelor of Animation		http://www130.griffith.edu.au/view/programFinderResults.php?programCode=1179
	Bachelor of Digital Media (Bachelor of Visual Media prior to 2010)		http://www130.griffith.edu.au/view/programFinderResults.php?programCode=1302
	Bachelor of Games Design		http://www130.griffith.edu.au/view/programFinderResults.php?programCode=1338
	Bachelor of Multimedia	Interactive Entertainment and Games Programming	http://www130.griffith.edu.au/view/programFinderResults.php?programCode=1110
Holmesglen Institute of TAFE	Bachelor of Screen Production	Animation	http://www.holmesglen.edu.au/careers/arts_and_design/bachelor_of_screen_production
	Diploma of Interactive Digital Media		http://www.holmesglen.edu.au/careers/business_and_IT/diploma_of_interactive_digital_media

Hunter Institute of TAFE	Advanced Diploma of Screen and Media		https://www.tafensw.edu.au/howex/servlet/Course?Command=GetCourse&CourseNo=19239
	Diploma of Game Artistry		https://www.tafensw.edu.au/howex/servlet/Course?Command=GetCourse&CourseNo=19201
	Diploma of Information Technology	Games Development	https://www.tafensw.edu.au/howex/servlet/Course?Command=GetCourse&CourseNo=19050
	Diploma of Information Technology	Multimedia	https://www.tafensw.edu.au/howex/servlet/Course?Command=GetCourse&CourseNo=19020
	Diploma of Interactive Digital Media		https://www.tafensw.edu.au/howex/servlet/Course?Command=GetCourse&CourseNo=19331
	Diploma of Screen and Media		https://www.tafensw.edu.au/howex/servlet/Course?Command=GetCourse&CourseNo=19237
Illawarra Institute of TAFE	Advanced Diploma of Screen and Media		http://www.cdmd.edu.au/digital.html
	Diploma of Information Technology	Games Development	http://www.illawarra.tafensw.edu.au/index.pl?action=course_search&selected_course_id=167&page=390&process=2&search_key=game
	Diploma of Information Technology	Multimedia	http://www.illawarra.tafensw.edu.au/index.pl?action=course_search&selected_course_id=165&page=390&process=2&search_key=game
	Diploma of Screen and Media		http://www.cdmd.edu.au/digital.html
James Cook University	Bachelor of Information Technology	Interactive Technologies and Game Design	http://www-public.jcu.edu.au/courses/course_info/index.htm?userText=103110-BIT-ITG-2010
	Bachelor of Information Technology	Multimedia Game Development	http://www.jcu.edu.au/handbook/2009/235_ug_fseit_courses.html#NC3574
	Bachelor of New Media Arts	Media Design (from 2011) Digital Media Design (prior to 2011)	http://www-public.jcu.edu.au/courses/course_info/index.htm?userText=15910-BNM-MDE
JMC Academy	Associate Degree of Digital Animation		http://www.jmcacademy.edu.au/Course/Digital-Media-and-3D-Animation.cfm
	Bachelor of Creative Technology (Digital Animation)		http://www.jmcacademy.edu.au/Course/Digital-Media-and-3D-Animation.cfm
	Diploma of Digital Animation		http://www.jmcacademy.edu.au/Course/Digital-Media-and-3D-Animation.cfm

Kangan Institute of TAFE	Advanced Diploma of Screen and Media		http://www.kangan.edu.au/tafe-courses-melbourne-victoria/advanced-diploma-of-screen-and-media/aosc/1853/
	Diploma of Interactive Digital Media		http://www.kangan.edu.au/tafe-courses-melbourne-victoria/diploma-of-interactive-digital-media/aosc/1793/
La Trobe University	Bachelor of Computer Science	Games Technology	http://www.latrobe.edu.au/handbook/2010/undergraduate/science-tech/single-degrees/sbcsgt.htm
Metropolitan South Institute of TAFE	Diploma of Information Technology	Multimedia	http://www.msit.tafe.qld.gov.au/courses/info/245.php
	Diploma of Interactive Digital Media		http://www.msit.tafe.qld.gov.au/courses/info/422.php
	Diploma of Screen and Media	Animation/Visual Effects	http://www.msit.tafe.qld.gov.au/courses/info/420.php
Monash University	Bachelor of Information Technology and Systems	Multimedia games development	http://www.monash.edu.au/pubs/2010handbooks/courses/3334.html
	Bachelor of Multimedia and Digital Arts		http://www.monash.edu/study/coursefinder/course/3115/
Murdoch University	Bachelor of Digital Media	Games Art and Design	http://www.murdoch.edu.au/Courses/Games-Art-and-Design/
	Bachelor of Digital Media	Interactive Digital Design	http://www.murdoch.edu.au/Courses/Interactive-Digital-Design/
	Bachelor of Science	Games Software Design and Production	http://www.murdoch.edu.au/Courses/Games-Software-Design-and-Production/
	Bachelor of Science	Games Technology	http://www.murdoch.edu.au/Courses/Games-Technology/
Northern Sydney Institute of TAFE	Diploma of Game Artistry		http://www.nsi.tafensw.edu.au/Courses/CourseDetail.aspx?num=19201&sem=S1/2011&op=MS
	Diploma of Information Technology	Games Development	http://www.nsi.tafensw.edu.au/Courses/CourseDetail.aspx?num=19050&sem=S1/2011&op=MS
	Diploma of Interactive Digital Media		http://www.nsi.tafensw.edu.au/Courses/CourseDetail.aspx?num=19331&sem=S1/2011&op=MS
	Diploma of Screen and Media		http://www.nsi.tafensw.edu.au/Courses/CourseDetail.aspx?num=19237&sem=S1/2011&op=MS
Nova Institute of Technology	Diploma of Interactive Digital Media		http://novainstitute.net.au/graphic-pre-press--multimedia
QANTM College	Bachelor of Creative Media	Interactive Media	http://brisbane.qantm.com/en-gb/course/2506/
	Bachelor of Interactive Entertainment	Animation	http://brisbane.qantm.com/en-gb/course/2481/
	Bachelor of Interactive Entertainment	Games Design	http://brisbane.qantm.com/en-gb/course/2488/
	Bachelor of Interactive Entertainment	Games Programming	http://brisbane.qantm.com/en-gb/course/2504/
	Diploma of Interactive Digital Media		http://brisbane.qantm.com/en-gb/course/2509/

Queensland University of Technology	Bachelor of Creative Industries	Animation	http://www.courses.qut.edu.au/cgi-bin/WebObjects/Courses.woa/wa/selectMajorFromMain?press=sf&courseID=13343&structureID=35962#35962
	Bachelor of Creative Industries	Digital Media	http://www.courses.qut.edu.au/cgi-bin/WebObjects/Courses.woa/wa/selectMajorFromMain?press=sf&courseID=13343&structureID=35962#35962
	Bachelor of Creative Industries	Interactive and Visual Design	http://www.courses.qut.edu.au/cgi-bin/WebObjects/Courses.woa/wa/selectMajorFromMain?press=sf&courseID=13343&structureID=35962#35962
	Bachelor of Fine Arts	Animation	http://www.courses.qut.edu.au/cgi-bin/WebObjects/Courses.woa/wa/selectMajorFromMain?press=sf&courseID=9719
	Bachelor of Fine Arts	Interactive and Visual Design	http://www.courses.qut.edu.au/cgi-bin/WebObjects/Courses.woa/wa/selectMajorFromMain?press=sf&courseID=9818
	Bachelor of Games and Interactive Entertainment		http://www.courses.qut.edu.au/cgi-bin/WebObjects/Courses.woa/wa/selectMajorFromMain?press=sf&courseID=9531
	Bachelor of Information Technology	Games Technology (Disc. 2009)	http://pdf.courses.qut.edu.au/coursepdf/qut_IT22_19131.pdf
	Bachelor of Technology Innovation	Digital Media	http://www.courses.qut.edu.au/cgi-bin/WebObjects/Courses.woa/wa/selectMajorFromMain?press=sf&courseID=13213
	Bachelor of Technology Innovation	Games Technology	http://www.courses.qut.edu.au/cgi-bin/WebObjects/Courses.woa/wa/selectMajorFromMain?press=sf&courseID=11970
Raffles College of Design & Commerce	Bachelor of Arts (Visual Communication)	Animation	http://www.raffles.edu.au/animation-bachelorofartsviscomm-465
	Bachelor of Arts (Visual Communication)	Games Design	http://www.raffles.edu.au/barts-games-design
	Bachelor of Arts (Visual Communication)	Multimedia Design	http://www.raffles.edu.au/multimedia-design-bachelorofartsviscomm-468
Royal Institute of Australia	Diploma of Information Technology	Multimedia	http://www.ria.edu.au/courses/ICA50905.pdf
Royal Melbourne Institute of Technology	Advanced Diploma of Screen and Media	Interactive Digital Media	http://www.rmit.edu.au/programs/c6087
	Bachelor of Arts	Animation and Interactive Media	http://www.rmit.edu.au/browse;ID=BP203

	Bachelor of Arts	Digital Art	http://www.rmit.edu.au/gamesanimation/undergrad/digitalart
	Bachelor of Arts	Games Graphics Design	http://www.rmit.edu.au/browse;ID=BP214
	Bachelor of Computer Science	Games, Graphics, and Digital Media	http://www.rmit.edu.au/browse;ID=EPSBP094GGD8AUSCY;STATUS=A?QRY=%2Btype%3Dflexible%20%2Bsubtype%3Deps%20%2Bnotes%3D%28%20 %22BP094%22%29&STYPE=ENTIRE
	Bachelor of Design	Multimedia Systems	http://www.rmit.edu.au/browse;ID=BP153
	Bachelor of Information Technology	Games and Graphics Programming	http://www.rmit.edu.au/browse;ID=BP215
	Diploma of Interactive Digital Media		http://www.rmit.edu.au/programs/c5218
Southbank Institute of Technology	Advanced Diploma of Screen and Media	Animation	http://www.southbank.edu.au/course/DOM/CUF60107.htm
	Diploma of Interactive Digital Media	Games Development	http://www.southbank.edu.au/course/DOM/CUF50207.htm
	Diploma of Screen and Media	Film and Visual Effects	http://www.southbank.edu.au/course/DOM/CUF50107.htm
Southern Cross Education Institute	Diploma of Interactive Digital Media		http://scei.com.au/lcinteractive.html
Swinburne University of Technology	Advanced Diploma of Screen and Media	Interactive Digital Media	http://courses.swinburne.edu.au/courses/Advanced-Diploma-of-Screen-and-Media-VCUF60107/local
	Bachelor of Arts	Digital Media	http://courses.swinburne.edu.au/courses/Bachelor-of-Arts-(Digital-Media)-N0515DIG/local
	Bachelor of Arts	Games and Interactivity	http://courses.swinburne.edu.au/courses/Bachelor-of-Arts-%28Games-and-Interactivity%29-N0515GAM/local
	Bachelor of Arts	Multimedia and Media	http://courses.swinburne.edu.au/courses/Bachelor-of-Arts-%28Multimedia-and-Media%29-N0515MMM/local
	Bachelor of Design	Multimedia Design (Pre-2011) Digital Media Design (2011 onwards)	http://courses.swinburne.edu.au/courses/Bachelor-of-Design-%28Multimedia-Design%29-DDIG10/local
	Bachelor of Film and Television		http://courses.swinburne.edu.au/courses/Bachelor-of-Film-and-Television-DFMTV10/local
	Bachelor of Information and Communication Technology	Games Development	http://courses.swinburne.edu.au/courses/Bachelor-of-Information-and-Communication-Technology-%28Games-Development%29-I032/local
	Bachelor of Multimedia/Bachelor of Science	Games and Interactivity/Computer Science and Software Engineering	http://courses.swinburne.edu.au/courses/Bachelor-of-Multimedia-%28Games-and-Interactivity%29%2fBachelor-of-Science-%28Computer-Science-and-Software-Engineering%29-J070/local

	Diploma of Information Technology	Multimedia	http://courses.swinburne.edu.au/courses/Diploma-of-Information-Technology-%28Multimedia%29-CICA50905/local
	Diploma of Interactive Digital Media		http://courses.swinburne.edu.au/courses/Diploma-of-Interactive-Digital-Media-VCUF50207/local
Sydney Institute of TAFE	Advanced Diploma of Screen and Media	Film & TV	http://www.sit.nsw.edu.au/courses/search.php?cid=26464&area=courses&Media_Index_ID=169
	Diploma of 3D Animation and Digital Effects		http://www.sit.nsw.edu.au/courses/search.php?cid=27005&area=courses&Media_Index_ID=111
	Diploma of Interactive Digital Media	Design	http://www.sit.nsw.edu.au/courses/search.php?cid=26426&area=courses&Media_Index_ID=111
	Diploma of Interactive Digital Media		http://www.sit.nsw.edu.au/courses/search.php?cid=26429&area=courses&Media_Index_ID=111
TAFE SA	Advanced Diploma of Screen and Media	CGI and Visual Effects	http://www.tafesa.edu.au/xml/course/aw/aw_HGZ.aspx
	Advanced Diploma of Screen and Media	Game Art	http://www.tafesa.edu.au/xml/course/aw/aw_HGY.aspx
	Diploma of Information Technology	Multimedia	http://www.tafesa.edu.au/xml/course/aw/aw_HBP.aspx
	Diploma of Screen and Media	CGI and Visual Effects	http://www.tafesa.edu.au/xml/course/aw/aw_HGZ.aspx
	Diploma of Screen and Media	Game Art	http://www.tafesa.edu.au/xml/course/aw/aw_HGY.aspx
Tasmanian Polytechnic	Advanced Diploma of Screen and Media		http://polycourses.yourchoice.tas.gov.au/Controller;jsessionid=AC9E39F0D16F68C61A9A62DFF489BA13?entity=search&command=view&id=1461
	Diploma of Interactive Digital Media		http://polycourses.yourchoice.tas.gov.au/Controller;jsessionid=6F327D4CE2982509A21BAFCE1D54BF00?entity=search&command=view&id=1460
University of Adelaide	Bachelor of Computer Graphics		http://www.adelaide.edu.au/programfinder/bcogr_bcompgr.html
University of Ballarat	Bachelor of Information Technology	Computer Games	http://www.ballarat.edu.au/programfinder/display.php?ID=433
	Diploma of Information Technology	Multimedia	http://www.ballarat.edu.au/programfinder/display.php?ID=706
University of New England	Bachelor of Computer Science	Games and Multimedia	http://www.une.edu.au/courses/2011/courses/BCOMP
University of New South Wales	Bachelor of Computer Science	Computer Game Design & Construction	http://www.cse.unsw.edu.au/undergrad/programs/csspec.html#G13978
	Bachelor of Digital Media		http://www.handbook.unsw.edu.au/undergraduate/programs/2011/4810.html

University of Queensland	Bachelor of Information Technology	Games Modelling	http://www.uq.edu.au/study/plan.html?acad_plan=GAMEM Y2230
	Bachelor of Multimedia Design		http://www.uq.edu.au/study/program.html?acad_prog=222 1
University of South Australia	Bachelor of Information Technology	Games and Entertainment Design	http://www.unisanet.unisa.edu.au/programs/program.asp?P rogram=LBCP&Plan=GAMES%2DLBCP&Year=2010
	Bachelor of Media Arts		http://www.unisanet.unisa.edu.au/programs/program.asp?P rogram=MBMA&Year=2011&Plan=UND-MBMA
University of Southern Queensland	Bachelor of Applied Media	Creative Media	http://www.usq.edu.au/handbook/2011/arts/BAPM.html
	Bachelor of Creative Arts	Creative Media	http://www.usq.edu.au/handbook/2011/arts/BCRA.html
	Bachelor of Multimedia		http://www.usq.edu.au/handbook/2011/arts/BAMM.html
University of Sydney	Bachelor of Design Computing	Interaction Design and Electronic Media Arts	http://sydney.edu.au/architecture/programs_of_study/unde rgraduate/design_computing/index.shtml
University of Tasmania	Bachelor of Computing	Games Technology	http://www.studentcentre.utas.edu.au/structures/CourseDet ails.aspx?year=2011&code=73D
	Bachelor of Computing	Human Interface Technology	http://www.studentcentre.utas.edu.au/structures/CourseDet ails.aspx?year=2011&code=73D
	Diploma of Creative Media Technology		http://www.futurestudents.utas.edu.au/courses?sq_content _src=%2BdXJsPWh0dHAIM0EIMkYIMkZ3d3cuc3R1ZGVudGNI bnRyZS51dGFzLmVkdS5hdSUyRmNvdXJzZXNh dHV0YXMIkZ EZXRhaWxzLmFzcHglM0Zjb3Vyc2VfaWQIMORLMI mYWxsPT E%3D
University of Technology, Sydney	Bachelor of Science	Games Development	http://datasearch.uts.edu.au/courses/coursedetail.cfm?spk _cd=C10229&spk_ver_no=3
University of Wollongong	Bachelor of Computer Science	Multimedia and Game Development	http://www.uow.edu.au/handbook/yr2010/ug/informatics/H 1006862.html
	Bachelor of Digital Media		http://www.uow.edu.au/handbook/yr2010/ug/crearts/H100 00040.html
Victoria University	Advanced Diploma of Screen and Media	Games Development Stream	http://www.vu.edu.au/courses/advanced-diploma-of-screen- and-media-cuf60107
	Bachelor of Creative Arts Industries	Digital Media	http://www.vu.edu.au/courses/bachelor-of-creative-arts- industries-0
	Bachelor of Interactive Media		http://www.vu.edu.au/courses/bachelor-of-interactive- media-abim
	Diploma of Information Technology	Multimedia (I)	http://www.vu.edu.au/courses/diploma-of-information- technology-multimedia-i-ica50905

	Diploma of Interactive Digital Media		http://www.vu.edu.au/courses/diploma-of-interactive-digital-media-cuf50207
	Diploma of Screen and Media		http://www.vu.edu.au/courses/diploma-of-screen-and-media-cuf50107
Victorian Institute of Technology	Diploma of Interactive Digital Media		http://www.vit.edu.au/courses/4/255.html
Victory College of Design	Diploma of Printing and Graphic Arts	Multimedia	http://www.victoryinstitute.nsw.edu.au/courses/graphic-pre-press/diploma
	Diploma of Screen and Media	Animation	http://www.victoryinstitute.nsw.edu.au/courses/screen-and-media/diploma
Western Institute of Technology	Diploma of Interactive Digital Media		http://www.wit.vic.edu.au/interactive.html

Summary Tables of all Providers and Courses

Provider type	#	%
Dual Sector	5	8.93%
University	24	42.86%
TAFE	15	26.79%
Private Provider	12	21.43%
Total	56	100%

State	#	%
ACT	3	4.76%
NSW	18	28.57%
NT	1	1.59%
QLD	13	20.63%
SA	4	6.35%
TAS	2	3.17%
VIC	17	26.98%
WA	5	7.94%
Total	63	100.00%

Survey 1 - List of Courses & Providers included in survey responses

Provider	Course	Major Study/Specialisation
Box Hill Institute of TAFE	Advanced Diploma of Screen and Media	Motion and Visual Effects
Box Hill Institute of TAFE	Diploma of Screen and Media	Motion Graphics
Central Institute of Technology	Advanced Diploma of Animation	
Central Institute of Technology	Diploma of Interactive Digital Media	
Central Institute of Technology	Diploma of Interactive Games Development	Games Programming
Central Institute of Technology	Diploma of Screen and Media	Animation
Central Queensland University	Bachelor of Digital Innovation	
Central Queensland University	Bachelor of Multimedia Studies	Multimedia Studies
Charles Darwin University	Bachelor of Creative Arts and Industries	New Media Design
Chisholm Institute of TAFE	Advanced Diploma of Screen and Media	Animation, Video, and 3D
Edith Cowan University	Bachelor of Computer Science	Games Programming
Edith Cowan University	Bachelor of Creative Industries	Game Design and Culture
Edith Cowan University	Bachelor of Science	Digital Media
Holmesglen Institute of TAFE	Bachelor of Screen Production	Animation
Holmesglen Institute of TAFE	Diploma of Interactive Digital Media	Multimedia
James Cook University	Bachelor of Information Technology	Interactive Technologies and Game Design
James Cook University	Bachelor of Information Technology	Multimedia Game Development
James Cook University	Bachelor of New Media Arts	Digital Media Design/Media Design
Kangan Institute of TAFE	Advanced Diploma of Screen and Media	Film specialisation
Kangan Institute of TAFE	Diploma of Interactive Digital Media	Digital Artist
Northern Sydney Institute of TAFE	Diploma of Game Artistry	
Northern Sydney Institute of TAFE	Diploma of Information Technology	Games Development
Northern Sydney Institute of TAFE	Diploma of Interactive Digital Media	
Northern Sydney Institute of TAFE	Diploma of Screen	
Northern Sydney Institute of TAFE	Diploma of Screen and Media	
Queensland University of Technology	Bachelor of Creative Industries	Animation
Queensland University of Technology	Bachelor of Creative Industries	Digital Media
Queensland University of Technology	Bachelor of Creative Industries	Interactive and Visual Design
Queensland University of Technology	Bachelor of Fine Arts	Animation
Queensland University of Technology	Bachelor of Fine Arts	Interactive and Visual Design
Queensland University of Technology	Bachelor of Games and Interactive Entertainment	
Queensland University of Technology	Bachelor of Information Technology	Games Technology
RAFFLES College of Design and Commerce	Bachelor of Arts (Visual Communication)	Animation
RAFFLES College of Design and Commerce	Bachelor of Arts (Visual Communication)	Games Design
RAFFLES College of Design and Commerce	Bachelor of Arts (Visual Communication)	Multimedia Design
Royal Melbourne Institute of Technology	Advanced Diploma of Screen and Media	Interactive Digital Media
Royal Melbourne Institute of Technology	Bachelor of Arts	Animation and Interactive Media
Royal Melbourne Institute of Technology	Bachelor of Arts	Digital Art
Royal Melbourne Institute of Technology	Bachelor of Arts	Games Graphics Design
Royal Melbourne Institute of Technology	Bachelor of Computer Science	Games, Graphics, and Digital Media
Royal Melbourne Institute of Technology	Bachelor of Design	Multimedia Systems
Royal Melbourne Institute of Technology	Bachelor of Information Technology	Games and Graphics Programming
Royal Melbourne Institute of Technology	Diploma of Interactive Digital Media	
Swinburne University of Technology	Advanced Diploma of Screen and Media	Interactive Digital Media
Swinburne University of Technology	Bachelor of Arts	Digital Media
Swinburne University of Technology	Bachelor of Arts	Multimedia and Media
Swinburne University of Technology	Bachelor of Arts	Games and Interactivity
Swinburne University of Technology	Bachelor of Design	Multimedia Design (Pre-2011)

		Digital Media Design (2011)
Swinburne University of Technology	Bachelor of Film and Television	
Swinburne University of Technology	Bachelor of Information and Communication Technology	Games Development
Swinburne University of Technology	Bachelor of Multimedia	Media Studies
Swinburne University of Technology	Bachelor of Multimedia/Bachelor of Science	Games and Interactivity/Computer Science and Software Engineering
Swinburne University of Technology	Diploma of Interactive Digital Media	
University of Sydney	Bachelor of Design Computing	Interaction Design and Electronic Media Arts
University of Technology, Sydney	Bachelor of Science	Games Development
University of Wollongong	Bachelor of Digital Media	

Survey 2 - List of Courses & Providers included in survey responses

Provider	Course name	Major Study
Academy of Information Technology Pty Ltd	Advanced Diploma of Screen and Media	Games Production
Academy of Information Technology Pty Ltd	Diploma of Information Technology	Multimedia
Academy of Information Technology Pty Ltd	Diploma of Interactive Digital Media	
Academy of Interactive Entertainment	Advanced Diploma of Professional Game Development	Art
Academy of Interactive Entertainment	Advanced Diploma of Professional Game Development	Software Development
Academy of Interactive Entertainment	Advanced Diploma of Screen and Media	3D animation and Visual FX
Academy of Interactive Entertainment	Bachelor of Games and Virtual Worlds	Programming
Chisholm Institute of TAFE	Advanced Diploma of Screen and Media	
Holmesglen Institute of TAFE	Bachelor of Screen Production	Animation
Holmesglen Institute of TAFE	Diploma of Interactive Digital Media	
James Cook University	Bachelor of Information Technology	Interactive Technologies and Game Design
James Cook University	Bachelor of New Media Arts	Media Design (from 2011) Digital Media Design (prior to 2011)
Kangan Institute of TAFE	Advanced Diploma of Screen and Media	
Kangan Institute of TAFE	Diploma of Interactive Digital Media	
La Trobe University	Bachelor of Computer Science	Games Technology
Queensland University of Technology	Bachelor of Creative Industries	Animation
Queensland University of Technology	Bachelor of Creative Industries	Interactive and Visual Design
Queensland University of Technology	Bachelor of Fine Arts	Animation
Queensland University of Technology	Bachelor of Fine Arts	Interactive and Visual Design
Royal Melbourne Institute of Technology	Advanced Diploma of Screen and Media	Interactive Digital Media
Royal Melbourne Institute of Technology	Bachelor of Arts	Animation and Interactive Media
Royal Melbourne Institute of Technology	Diploma of Interactive Digital Media	
Southbank Institute of Technology	Diploma of Interactive Digital Media	Games Development
Swinburne University of Technology	Bachelor of Arts	Digital Media
Swinburne University of Technology	Bachelor of Arts	Games and Interactivity
Swinburne University of Technology	Bachelor of Arts	Multimedia and Media
Swinburne University of Technology	Bachelor of Multimedia	Media Studies
Swinburne University of Technology	Bachelor of Multimedia/ Bachelor of Science	Games and Interactivity/ Computer Science and Software Engineering
TAFE SA	Advanced Diploma of Screen and Media	CGI and Visual Effects

TAFE SA	Advanced Diploma of Screen and Media	Game Art
TAFE SA	Diploma of Screen and Media	CGI and Visual Effects
TAFE SA	Diploma of Screen and Media	Game Art
University of Sydney	Bachelor of Design Computing	Interaction Design and Electronic Media Arts
University of Wollongong	Bachelor of Computer Science	Multimedia and Game Development
University of Wollongong	Bachelor of Digital Media	

Survey 2 - List of Courses & Providers included Website information collection

Provider	Course name	Major Study
Australian National University	Bachelor of Digital Arts	
Bond University	Bachelor of Computer Games	
Bond University	Bachelor of Multimedia Design	
Box Hill Institute of TAFE	Advanced Diploma of Screen and Media	Motion and Visual Effects
Box Hill Institute of TAFE	Diploma of Screen and Media	Motion Graphics
Canberra Institute of Technology	Advanced Diploma of Design	Digital Media
Canberra Institute of Technology	Advanced Diploma of Screen and Media	Animation 3D
Canberra Institute of Technology	Diploma of Information Technology	Multimedia
Central Institute of Technology	Advanced Diploma of Animation	
Central Institute of Technology	Diploma of Interactive Digital Media	
Central Institute of Technology	Diploma of Interactive Games Development	Games Programming
Central Institute of Technology	Diploma of Interactive Games Development	Technical Art
Central Institute of Technology	Diploma of Screen and Media	Animation
Central Queensland University	Bachelor of Digital Innovation	
Central Queensland University	Bachelor of Multimedia Studies	Multimedia Studies
Charles Darwin University	Bachelor of Creative Arts and Industries	New Media Design
Charles Sturt University	Bachelor of Arts	Animation and Visual Effects
Charles Sturt University	Bachelor of Computer Science	Games Programming
Charles Sturt University	Bachelor of Computer Science	Games Technology
Deakin University	Bachelor of Information Technology	Games Design and Development
Deakin University	Bachelor of Interactive Media	
Edith Cowan University	Bachelor of Computer Science	Games Programming
Edith Cowan University	Bachelor of Creative Industries	Game Design and Culture
Edith Cowan University	Bachelor of Creative Industries	Interactive Media Development
Edith Cowan University	Bachelor of Science	Digital Media
Griffith University	Bachelor of Games Design	
Griffith University	Bachelor of Multimedia	Interactive Entertainment and Games Programming
Hunter Institute of TAFE	Diploma of Information Technology	Multimedia
Hunter Institute of TAFE	Diploma of Interactive Digital Media	
Hunter Institute of TAFE	Diploma of Screen and Media	
Metropolitan South Institute of TAFE	Diploma of Information Technology	Multimedia
Metropolitan South Institute of TAFE	Diploma of Screen and Media	Animation/Visual Effects
Monash University	Bachelor of Information Technology and Systems	Multimedia games development
Monash University	Bachelor of Multimedia and Digital Arts	
Murdoch University	Bachelor of Digital Media	Games Art and Design
Murdoch University	Bachelor of Digital Media	Interactive Digital Design
Murdoch University	Bachelor of Science	Games Software Design and Production
Murdoch University	Bachelor of Science	Games Technology
Nova Institute of Technology	Diploma of Interactive Digital Media	
QANTM College	Diploma of Interactive Digital Media	
Queensland University of Technology	Bachelor of Creative Industries	Digital Media

Queensland University of Technology	Bachelor of Games and Interactive Entertainment	
Queensland University of Technology	Bachelor of Technology Innovation	Digital Media
Queensland University of Technology	Bachelor of Technology Innovation	Games Technology
Royal Institute of Australia	Diploma of Information Technology	Multimedia
Royal Melbourne Institute of Technology	Bachelor of Arts	Games Graphics Design
Royal Melbourne Institute of Technology	Bachelor of Computer Science	Games, Graphics, and Digital Media
Royal Melbourne Institute of Technology	Bachelor of Design	Multimedia Systems
Royal Melbourne Institute of Technology	Bachelor of Information Technology	Games and Graphics Programming
Southbank Institute of Technology	Advanced Diploma of Screen and Media	Animation
Southbank Institute of Technology	Diploma of Screen and Media	Film and Visual Effects
Southern Cross Education Institute	Diploma of Interactive Digital Media	
Swinburne University of Technology	Advanced Diploma of Screen and Media	Interactive Digital Media
Swinburne University of Technology	Bachelor of Design	Multimedia Design (Pre-2011) Digital Media Design (2011 onwards)
Swinburne University of Technology	Diploma of Information Technology	Multimedia
Swinburne University of Technology	Diploma of Interactive Digital Media	
Sydney Institute of TAFE	Advanced Diploma of Screen and Media	Film & TV
Sydney Institute of TAFE	Diploma of 3D Animation and Digital Effects	
Sydney Institute of TAFE	Diploma of Interactive Digital Media	Design
Sydney Institute of TAFE	Diploma of Interactive Digital Media	
TAFE SA	Diploma of Information Technology	Multimedia
Tasmanian Polytechnic	Advanced Diploma of Screen and Media	
Tasmanian Polytechnic	Diploma of Interactive Digital Media	
University of Adelaide	Bachelor of Computer Graphics	
University of Ballarat	Bachelor of Information Technology	Computer Games
University of New South Wales	Bachelor of Digital Media	
University of Tasmania	Diploma in Creative Media Technology	
University of Technology, Sydney	Bachelor of Science	Games Development
Victoria University	Advanced Diploma of Screen and Media	Games Development Stream
Victoria University	Diploma of Information Technology	Multimedia
Victoria University	Diploma of Interactive Digital Media	
Victoria University	Diploma of Screen and Media	
Victorian Institute of Technology	Diploma of Interactive Digital Media	
Victory College of Design	Diploma of Printing and Graphic Arts	Multimedia
Victory College of Design	Diploma of Screen and Media	Animation
Western Institute of Technology	Diploma of Interactive Digital Media	

Survey 3 - List of Courses & Providers included in survey responses

Provider	Course name	Major Study
Academy of Information Technology Pty Ltd	Advanced Diploma of Screen and Media	Games Production
Academy of Information Technology Pty Ltd	Diploma of Interactive Digital Media	
Academy of Information Technology Pty Ltd	Diploma of IT	Multimedia
Academy of Interactive Entertainment	Advanced Diploma of Professional Game Development	3D Animation and Visual FX for Games
Academy of Interactive Entertainment	Advanced Diploma of Professional Game Development	Game Programming
Academy of Interactive Entertainment	Advanced Diploma of Screen and Media	3D animation and Visual FX
Academy of Interactive Entertainment	Bachelor of Games and Virtual Worlds	Programming

Chisholm Institute of TAFE	Advanced Diploma of Screen and Media	
Holmesglen Institute of TAFE	Bachelor of Screen Production	Animation
Holmesglen Institute of TAFE	Diploma of Interactive Digital Media	
James Cook University	Bachelor of New Media Arts	Media Design (from 2011) Digital Media Design (prior to 2011)
Kangan Institute of TAFE	Advanced Diploma of Screen and Media	
Kangan Institute of TAFE	Diploma of Interactive Digital Media	
La Trobe University	Bachelor of Computer Science	Games Technology
Queensland University of Technology	Bachelor of Creative Industries	Animation
Queensland University of Technology	Bachelor of Creative Industries	Digital Media
Queensland University of Technology	Bachelor of Creative Industries	Interactive and Visual Design
Queensland University of Technology	Bachelor of Fine Arts	Animation
Queensland University of Technology	Bachelor of Fine Arts	Interactive and Visual Design
Royal Melbourne Institute of Technology	Advanced Diploma of Screen and Media	Interactive Digital Media
Royal Melbourne Institute of Technology	Diploma of Interactive Digital Media	
Southbank Institute of Technology	Diploma of Interactive Digital Media	Games Development
Swinburne University of Technology	Bachelor of Arts	Digital Media
Swinburne University of Technology	Bachelor of Arts	Games and Interactivity
Swinburne University of Technology	Bachelor of Arts	Multimedia and Media
Swinburne University of Technology	Bachelor of Multimedia/Bachelor of Science	Games and Interactivity/Computer Science and Software Engineering
TAFE SA	Advanced Diploma of Screen and Media	CGI and Visual Effects
TAFE SA	Advanced Diploma of Screen and Media	Game Art
TAFE SA	Diploma of Screen and Media	CGI and Visual Effects
TAFE SA	Diploma of Screen and Media	Game Art
University of Sydney	Bachelor of Design Computing	Interaction Design and Electronic Media Arts
University of Wollongong	Bachelor of Computer Science	Multimedia and Game Development
University of Wollongong	Bachelor of Digital Media	

Survey 3 - List of Courses & Providers included Website information collection

Provider	Course name	Major Study
Bond University	Bachelor of Computer Games	
Bond University	Bachelor of Multimedia Design	
Central Queensland University	Bachelor of Digital Innovation	
Central Queensland University	Bachelor of Multimedia Studies	Multimedia Studies
Charles Darwin University	Bachelor of Creative Arts and Industries	New Media Design
Charles Sturt University	Bachelor of Arts	Animation and Visual Effects
Charles Sturt University	Bachelor of Computer Science	Games Programming
Charles Sturt University	Bachelor of Computer Science	Games Technology
Gold Coast Institute of TAFE	Diploma of Interactive Digital Media	
Gold Coast Institute of TAFE	Diploma of Screen and Media	
Griffith University	Bachelor of Digital Media (Bachelor of Visual Media prior to 2010)	
Griffith University	Bachelor of Multimedia	Interactive Entertainment and Games Programming
Nova Institute of Technology	Diploma of Interactive Digital Media	

Royal Institute of Australia	Diploma of Information Technology	Multimedia
Royal Melbourne Institute of Technology	Bachelor of Arts	Animation and Interactive Media
Royal Melbourne Institute of Technology	Bachelor of Arts	Digital Art
Royal Melbourne Institute of Technology	Bachelor of Arts	Games Graphics Design
Royal Melbourne Institute of Technology	Bachelor of Information Technology	Games and Graphics Programming
University of Adelaide	Bachelor of Computer Graphics	
University of Ballarat	Bachelor of Information Technology	Computer Games
University of Ballarat	Diploma of Information Technology	Multimedia
University of Southern Queensland	Bachelor of Applied Media	Creative Media
University of Southern Queensland	Bachelor of Creative Arts	Creative Media
Victorian Institute of Technology	Diploma of Interactive Digital Media	
Victory College of Design	Diploma of Printing and Graphic Arts	Multimedia
Western Institute of Technology	Diploma of Interactive Digital Media	



ISIS Survey 1: Course Statistics

Thank you for participating in the Integrative Skills Integration Scheme (ISI) curriculum review project. This survey is designed to collect some basic course statistics for courses in interactive media and related areas. Please complete the survey questions for each course. If you do not have data for all years, please note "Not available". If the course only commenced in recent years, please note the year of commencement. If there are any comments you would like to make regarding the course or statistics provided, please use the Comments column at the end. If there are any courses you offer that are not listed, please feel free to add them. The information we have collected is based on provider websites and we understand may not include courses that are no longer on offer to new students, but may have an existing cohort. We would be interested in including these courses where possible to provide a complete picture of interactive media courses in the past 5 years.

Privacy: The data for individual institutions will be kept confidential and only aggregated data will be published in the ISIS reports and other publications. A list of participating providers will be included for reference. If you would not like to be listed as a participating provider, please advise us.

If you have any questions about this survey or the ISIS project, please contact:

Ms Leonie Kirchmayer, Project Consultant – ISIS Education Stream Ph: 0414 810 527 E: lkirchmayer@gmail.com

Course Details

ISIS Reference	
Provider	
Course Name	
Major Study/Specialisation Name	
Contact Person (please update if incorrect)	

Enrolments (Commencing Students) 2005-2010						Completions 2005-2009					Comments
Enr 2005	Enr 2006	Enr 2007	Enr 2008	Enr 2009	Enr 2010	Com 2005	Com 2006	Com 2007	Com 2008	Com 2009	
Demographics: Based on the currently enrolled students in 2010, please list the percentage in each of the following demographic brackets											Comments
Male (%)	Female (%)	Age 16-21 (%)	Age 22-25 (%)	Age 26-30 (%)	Age 31-40 (%)	Age 41-50 (%)	Age 50+ (%)	International (%)	Domestic (%)		



ISIS Survey 2: Curriculum Design

The purpose of this survey is to gain an understanding of key aspects of the curriculum design, especially with regards to professional experience, engagement with industry as part of curriculum review and development, and a sense of graduate expectations and destinations.

Course Details

ISIS Reference	
Provider	
Course Name	
Major Study/Specialisation Name	
Contact Person (please update if incorrect)	

Survey Instructions

The survey is designed to be completed for each course or major study/specialisation at your institution. Where a list of options is presented, please select the most applicable using either **Bold** or **Highlighting**. With any of the questions, please feel free to provide comments or other information in the text boxes. After the survey has been returned, we may contact you with some follow up questions. Please check that our contact details for you are correct.

ISIS Curriculum Reports and Industry & Education Forums

With this survey, you will have received a copy of the first ISIS Curriculum Report. After the next stage of the curriculum review research has been completed, the next ISIS Curriculum Report will be released to the participating course providers and key industry stakeholders. The ISIS team will then hold a number of Industry & Education Forums in 2011 to bring members of the Interactive Media and Gaming industry and Educators together to discuss some of the key issues and trends identified in the report and to strengthen the relationships between education and industry. All participating course providers will be sent invitations to these events once the dates have been confirmed.

ISIS Project Contacts

For any questions about the survey or the ISIS project, please contact us at:

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Ph: 0414 810 527

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Professor Sue Rowley

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Curriculum structure

1. What year was the course first offered?	
2. If the course is no longer on offer, what was the last year the course took new enrolments?	
3. What is the duration of the course in years?	
4. Is this course usually undertaken as full-time or part-time?	<ul style="list-style-type: none"> - Full-time only (part-time not available or not recommended) - Mostly full-time, but part-time is available - Mix of full-time and part-time - Mostly part-time, but full-time is available - Part-time only (not available full-time)
5. Is the course accredited with a professional body? • If yes, please list.	<ul style="list-style-type: none"> - Yes - No
6. Approximately what percentage of the course contains Units of Study (Subjects) that are specifically focused on interactive media and/or gaming (select which best applies)?	<ul style="list-style-type: none"> - 0-10% - 11-20% - 21-30% - 31-40% - 41-50% - 51-60% - 61-70% - 71-80% - 81-90% - 91-100%
7. Which of the following statements best describes the structure of this course:	<ul style="list-style-type: none"> - A specialist degree in Interactive Media and/or Gaming - A Creative Industries/Arts degree with a major/specialisation in Interactive Media and/or Gaming - A Computer Science/IT degree with a major/specialisation in Interactive Media and/or Gaming - Not a course with significant Interactive Media and/or Gaming content
8. Do you offer any postgraduate coursework or research options in interactive media and/or gaming?	<ul style="list-style-type: none"> - No, only undergraduate programs - Bachelor Honours - Graduate Certificate - Graduate Diploma - Masters by Coursework - Masters by Research - Doctoral programs

Curriculum review and development

<p>9. How frequently and at what level is the course curriculum reviewed? Please indicate next to the frequency whether the review is internal (school/faculty only) or external (includes external advisors). (e.g. an internal review may be done annually and an external review done every 5 years)</p>	<ul style="list-style-type: none"> - Annually - Every 2 years - Every 3 years - Every 4 years - Every 5 years - Longer than 5 years
<p>10. As part of the review and development process, do you formally engage with industry?</p>	<ul style="list-style-type: none"> - Yes - No
<p>If yes to the above, please highlight which forms of industry engagement are used, as part of the curriculum review and development process.</p>	<ul style="list-style-type: none"> - Inclusion of an interactive media/gaming industry professional on a specific curriculum review committee - Inclusion of an interactive media/gaming industry professional on a standing Faculty Advisory Committee or similar - Consultation with interactive media/gaming associations and related agencies (select applicable): <ul style="list-style-type: none"> - Games Developers' Association of Australia (GDAA) - Australian Interactive Media Industry Association (AIMIA) - International Game Developers Association (IGDA) - Government agencies/initiatives, e.g. Multimedia Victoria (please list) - Other (please list) - Consultation with companies or individuals in the Interactive Media or Gaming Industry (please list if possible) - Inclusion of a broader industry professional on a specific curriculum review committee (please indicate what industry, e.g. IT, Creative Industries) - Inclusion of a broader industry professional on a standing Faculty Advisory Committee or similar (please indicate what industry, e.g. IT, Creative Industries) - Consultation with broader industry associations (please list) - Other (please list)
<p>11. As part of the review and development process, do you formally engage with other Faculties/Schools/Departments to consider complimentary fields of study for inclusion in the curriculum (select all that apply)?</p>	<ul style="list-style-type: none"> - None - Business/Commerce - IT/Computer Science - Law/Legal Studies - Creative Industries/Creative Arts - Arts/Media/Communications

Graduate outcomes

12. Do you have any data on the destinations of the graduates from this course? (e.g. Graduate Destination Survey, Alumni surveys)	<ul style="list-style-type: none"> - Yes - No
If yes, how many have gone into the interactive media or gaming industry?	<ul style="list-style-type: none"> - <25% - 25-50% - 50-75% - 75-100%
If no data is available, anecdotally, what is your impression of the proportion of graduates who have gone into the interactive media or gaming industry?	<ul style="list-style-type: none"> - <25% - 25-50% - 50-75% - 75-100%
13. Have you received any feedback, formal or informal, from graduates about their employment prospects or experiences in trying to enter the industry?	<ul style="list-style-type: none"> - Yes - No
If yes, please provide a brief description:	
14. Which of the following statements best represents a realistic expectation for graduates from this course?	<p>On completion of this course students will:</p> <ul style="list-style-type: none"> - be able to gain employment in the interactive media and gaming industry without much difficulty - be qualified to gain employment in the interactive media and gaming industry, but should be aware that jobs in Australia are limited and highly competitive. - have some grounding in interactive media and gaming, however they may need further education/training/experience to develop the specific skills needed to enter the interactive media and gaming industry. - have a good foundation in a broader discipline (IT, Creative Industries), but will not have covered enough specific interactive media/gaming content to expect employment in an interactive media/gaming role. Students should be able to find employment in their main discipline without much difficulty.

Professional Learning

15. Please indicate what types of Professional Experience are offered as part of this course and whether they are required or optional?

Professional Experience Type (see table below)	Required or Optional?	Brief Description and Comments
Industry placement		
Industry project		
Industry competition		
Industry simulation		
Industry mentoring		
Industry Study Tour		
Industry practitioner delivery		
Other		
None		

Industry placement:

An internship or other work experience in industry. May be paid or unpaid.

Industry project:

A project for a real-world client organisation. May be individual or team based.

Industry competition:

Industry competitions involves industry running, judging, sponsoring or in some other way supporting or encouraging students, often in teams, to compete against each other to achieve a business-oriented goal in a short time frame. The participation in the competition may or may not be given credit towards the course.

Industry simulation:

Reality-based, experiential learning-centred approaches engaging students in real-time analysis and decision making in real-world situations within the safety of an educational environment. For example, a simulated work environment or projects for a simulated client. May also include in-depth industry case studies where students are give an actual industry scenario or challenge faced by industry requiring students to apply analytical and problem-solving skills to explore solutions and/or critically evaluate those made by industry professionals.

Industry mentoring:

Matching students with a professional role model who can offer expertise, model practice, share personal insights, and provide guidance and support. May be formal or informal and may only be available to select students (e.g. high performing students, part of a scholarship program).

Industry Study Tour:

Industry study tours include field trips, site visits and more lengthy tours. Industry study tours might last a day or a month and aim to create opportunities by travelling to industry-related places and situations, allowing students to apply theory, see theory in practice, ask questions of professionals in situ, compare and contrast different sites of work and connect curriculum and learning to professional practice. May include both local and overseas.

Industry practitioner delivery:

Industry practitioners engage in the teaching program to deliver specialised lectures, present in seminar series, conduct professional development workshops or participate in assessment of student projects and presentations. This may be included as part of a normal Unit of Study or a separate activity (e.g. lunch time seminar series or standalone professional development workshop) that may or may not be given credit towards the course.

16. What Units of Study on Professional Practice are offered as part of this course? Please include elective units.

If none, just state "None" in the table. Please refer to the table below for descriptions of each field. Add as many rows as necessary.

Unit of Study code*	Unit of Study name*	Professional learning type*	Focus*	Core or Elective?	Year of Study*	EFTSL*	Comments

Unit of Study Code and Unit of Study Name

Whatever your institution calls your Units of Study/Subjects.

Professional Learning Type:

- **Professional Practice** (e.g. relevant information and skills required to practice in the profession, provides information about the shape and nature of the industry etc..)
- **IP/Legal Information**
- **General Business Skills** (e.g. basics of management, accounting, HR practices, small business creation, entrepreneurship, innovation)
- **Other** (please describe)

Focus

- Specific Interactive Media/Gaming Industry Focus
- Broader Computer/IT Industry Focus
- Broader Creative Industries/Arts Focus
- General (non-industry specific)

Year of Study

- 1st year
- 2nd year
- 3rd year
- 4th year

Where subjects can be taken at any point, use the level of the subject to indicate roughly what year it would occur.

EFTSL

Equivalent Full-Time Study Load as reported to DEEWR. This is usually worked out based on your institution's method of giving a credit value to Units of Study. It is usually published with Unit of Study information for students. Usually an "average" subject is 0.125 EFTSL, based on a normal full-time load being 8 subjects per year/4 subjects per semester. A "double" load subject would be 0.25 EFTSL. We ask for EFTSL as this allows us to compare units across providers where systems of credit points vary.



ISIS Survey 3: Articulation and Advanced Standing – Part 1

The purpose of this survey is to gain an understanding of articulation and advanced standing options associated with these courses. In particular, the ISIS project is investigating in the movement of students between the VET and Higher Education sector in the field of interactive media and/or gaming. Through this research we would develop an understanding of formal articulation/advanced standing arrangements between course providers and the incentives and impediments to forming these arrangements. We will estimate how many students are seeking credit from previous courses and/or seeking multiple course qualifications in order to enter the industry.

Course Details

ISIS Reference	
Provider	
Course Name	
Major Study/Specialisation Name	
Contact Person (please update if incorrect)	

Survey Instructions

The survey is designed to be completed for each course or major study/specialisation at your institution. The survey comes in two parts so that they can be forwarded to the most appropriate person. Part 1 is asking for data on admissions and advanced standing (similar to that reported to DEEWR), which may be obtained from student systems. Part 2 covers more detailed questions about articulation and advanced standing processes. Where a list of options is presented, please select the most applicable using either **Bold** or **Highlighting**. With any of the questions, please feel free to provide comments or other information in the text boxes. After the survey has been returned, we may contact you with some follow up questions. Please check that our contact details for you are correct.

ISIS Project Contacts

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ISIS Survey 3: Articulation and Advanced Standing – Part 1

Privacy note: The data for individual institutions will be kept confidential and only aggregated data will be published in the ISIS reports and other publications. A list of participating providers will be included for reference. If you would not like to be listed as a participating provider, please advise us.

The data requested in the survey below has been modeled from DEEWR Higher Education reports and using their terminology. If you are unable to obtain the data for any of the survey items, please answer “not available”.

Advanced Standing Data

For the students enrolled in 2010:	
1. How many received credit towards this course from prior qualifications?	
2. Of the credit granted, what is the average amount granted (in EFTSL)	
– Specified	
– Unspecified	
3. Where credit has been granted, what was the source of the credit (as % of total):	
– Australian Higher Education Provider (University)	
– Australian VET Provider	
– Overseas Provider	
– Work experience in industry	
4. Where credit has been granted, what was the level of education of the qualification for which credit was granted (as % of total):	
– Certificate I or II	
– Certificate III or IV	
– Diploma	
– Advanced Diploma	
– Associate Degree	
– Bachelor Degree	
– Postgraduate course	
5. Where credit has been granted, what type of provider (as % of total):	
– University	
– TAFE	
– Private Higher Education Provider	
– Private Vocational Education Provider	
– Overseas institution	
– Other	

Admission data

6. In 2010, how many commencing students were admitted on the basis of:	
- A higher education course (Australian or overseas equivalent; complete or incomplete)	
- Secondary education undertaken at school, VET or other Higher Education Provider (Australian or overseas equivalent)	
- A VET award course other than a secondary education course (Australian or overseas equivalent; complete or incomplete)	
- Mature age special entry provisions	
- A professional qualification	
- Other basis	



ISIS Survey 3: Articulation and Advanced Standing – Part 2

The purpose of this survey is to gain an understanding of articulation and advanced standing options associated with these courses. In particular, the ISIS project is investigating in the movement of students between the VET and Higher Education sector in the field of interactive media and/or gaming. Through this research we would develop an understanding of formal articulation/advanced standing arrangements between course providers and the incentives and impediments to forming these arrangements. We will estimate how many students are seeking credit from previous courses and/or seeking multiple course qualifications in order to enter the industry.

Course Details

ISIS Reference	
Provider	
Course Name	
Major Study/Specialisation Name	
Contact Person (please update if incorrect)	

Survey Instructions

The survey is designed to be completed for each course or major study/specialisation at your institution. The survey comes in two parts so that they can be forwarded to the most appropriate person. Part 1 is asking for data on admissions and advanced standing (similar to that reported to DEEWR), which may be obtained from student systems. Part 2 covers more detailed questions about articulation and advanced standing processes. Where a list of options is presented, please select the most applicable using either **Bold** or **Highlighting**. With any of the questions, please feel free to provide comments or other information in the text boxes. After the survey has been returned, we may contact you with some follow up questions. Please check that our contact details for you are correct.

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ISIS Survey 3: Articulation and Advanced Standing – Part 2

Credit and Articulation arrangements

<p>1. What formal articulation/advanced standing arrangements do you have for students who have completed another course (either at this institution or at another education provider) to gain entry and/or credit into this course? You can attach documents or provide a link to a website if that is easier.</p>	
<p>2. What formal articulation/advanced standing arrangements do you have for students who have completed this course to gain entry and/or credit into another course (either at this institution or at another education provider)? You can attach documents or provide a link to a website if that is easier.</p>	
<p>3. What general credit arrangements are in place at your institution (e.g. a set amount of unspecified credit for an award at a particular level) You can attach documents or provide a link to a website if that is easier.</p>	
<p>4. Do you have different articulation/advanced standing processes for domestic students and international students? If so, select all that apply.</p>	<ul style="list-style-type: none"> - No difference, applications for both domestic and international students are processed the same. - Articulation arrangements are developed and maintained by different divisions within the institution - Different staff members are delegated to create formal articulation arrangements with institutions - Applications for advanced standing are processed by different divisions - Advanced Standing is assessed at different points in the admissions process (e.g. pre-enrolment vs. post-enrolment) - There are more formal agreements with international institutions than domestic institutions as these are necessary for international student recruitment where credit may shorten course duration and must be noted for visa purposes. - Other (please detail)

<p>5. If you do not have many formal articulation/advanced standing arrangements, why do you think this is so? Select all that apply.</p>	<ul style="list-style-type: none"> - Prefer to handle applications for credit on a case-by-case basis. - Not enough students applying for credit to make it worth creating formal arrangements. - Too much time and effort required to keep up with curriculum changes from multiple providers and courses each year. - Inadequate information on the curriculum of other courses to determine equivalence of units. - Desire to control enrolment numbers (i.e. not wanting to “guarantee” entry via particular pathways) - Don’t want to confuse students with courses that may provide credit but not entry into the course. - This course is highly prescriptive there is not much elective space in which unspecified credit could be used. - Accreditation requirements (e.g. Australian Computer Society) restrict how much credit can be granted and in what areas of the course. - Other course providers are not willing to enter into formal agreements. - Other reason (please detail)
<p>6. Anecdotally, what proportion of students in this course has gained entry and/or credit from a previously completed course?</p>	<ul style="list-style-type: none"> - 0-10% - 11-20% - 21-30% - 31-40% - 41-50% - 51-60% - 61-70% - 71-80% - 81-90% - 91-100%
<p>7. Anecdotally, do you know whether students who complete this course tend to go on to complete another course in order to further their skills and employment prospects in the interactive media/gaming industry?</p>	<ul style="list-style-type: none"> - No, students are not going on to other courses - Unsure/Unknown - VET Courses (Certificates I-IV, Diploma, Advanced Diploma) - Higher Education Courses (Bachelor, Honours, Postgraduate Coursework, Higher Degree Research) - Non-award, professional development programs
<p>8. Do you think having articulation and/or advanced standing options influences prospective students applying for course?</p>	<ul style="list-style-type: none"> - No, not a deciding factor for most students - Yes, but only for students who have already completed another course - Yes, because it provides a pathway into another course

NRT packages – Units specific to interactive media or gaming

Diploma & Advanced Diploma Competencies, sorted by Relevance

Competency	Average Relevance 5 = Very High, 1 = Very Low
ICAA4058B Apply skills in object-oriented design	4.60
CUFANM501A Create 3D digital character animation	4.43
ICAB4219B Apply introductory object-oriented language skills	4.40
ICAB5226B Apply advanced object-oriented language skills	4.40
CUFANM502A Create 3D digital environments	4.29
ICAB4075B Use a library or pre-existing components	4.20
ICAITB170A Build a database	4.20
VBP024 Develop graphical user interfaces (GUIs) for virtual worlds	4.17
VBP026: Develop 3D environments for virtual worlds	4.17
CUFDIG505A Design information architecture	4.17
CUFANM503A Design animation and digital visual effects	4.17
CUFDIG506A Design interaction	4.14
VBN324 Create 3D characters for games	4.00
VBN326 Create design documents for games	4.00
NSWTGAM501A Produce 3D components for interactive games	4.00
NSWTGAM502A Design 3D game levels and environments	4.00
VBP025: Develop scripts for virtual worlds	4.00
BSBEBUS508A Build a virtual community	4.00
ICAITB182A Write and compile code, based on requirements	4.00
ICAITAD042B Determine client business needs	4.00
CUFDIG504A Design games	3.86
CUFDIG507A Design digital simulations	3.86
WA50661FTI08A Produce an interactive game project	3.86
WA50661FTI09A Design interactive game play	3.86
(NSW Competencies)	3.83
VBN323 Develop graphical user interfaces (GUIs) for games	3.83
WA50661FTI03A Identify and apply knowledge of game playing	3.83
VBN325 Create 3D environments for games	3.80
VBN327 Develop scripts for games	3.80
ICAITB181A Write and document program modules	3.80
ICAITT082A Manage the testing process	3.80
ICPMM61DA Prepare multimedia for different platforms	3.80
ICAITB137A Produce basic client side script for dynamic web pages	3.50
ICAITB068A Build using RAD	3.50
CUFDIG501A Coordinate the testing of interactive media products	3.43
CUFDIG502A Design web environment	3.40
ICPMM581B Manage multimedia production	3.40
CUFDIG503A Design elearning resources	2.67

Innovation & Business Skills Australia (IBSA) 2009, Review of the digital games development: Games Arts, Animation and Programming, December 2009,
http://www.ibsa.org.au/Portals/ibsa.org.au/docs/reports/IBSA%20Final%20Report_GamesDevelopment_%20V1.2.pdf

Engagement with industry – Associations and Companies from the responses

Interactive media/gaming associations and related agencies

Organisation	Website
Australian Interactive Media Industry Association (AIMIA)	http://www.aimia.com.au/
Games Developers' Association of Australia (GDA)	http://gdaa.com.au/
Innovation & Business Skills Australia (IBSA)	http://www.ibsa.org.au/Default.aspx
International Game Developers Association (IGDA)	http://www.igda.org/
Multimedia Victoria	http://www.mmv.vic.gov.au/
Queensland Games	http://www.queenslandgames.com/home

Broader industry associations

Organisation	Website
Association for Computing Machinery	http://www.acm.org/
Australian Cinematographers Society	http://www.cinematographer.org.au/
Australian Computer Society	http://www.acs.org.au/
Australian Network for Art and Technology	http://www.anat.org.au/
Film Victoria	http://film.vic.gov.au/
IEEE Computer Society	http://www.computer.org/
Screen Producers Association of Australia (SPAA)	http://www.spaa.org.au/
Visual Effect Society	http://www.visualeffectsociety.com/

Companies or individuals in the Interactive Media or Gaming Industry

Company or Individual	Brief Description	Website
2kMarin	2K Marin is part of 2K Games, a publishing label of Take-Two Interactive. Based in both Canberra, Australia and San Francisco, USA.	http://www.2kmarin.com/
Adam Elliott	An independent stop-motion animation writer and director based in Melbourne. Known for works such as Harvie Krumpet and Mary and Max.	http://www.adamelliott.com.au/
Animagraphics	A special effects company	
Big Ant Studios	An Australian game development studio founded in 2001, based in Melbourne.	http://www.bigant.com/
dLux MediaArts	A screen and media arts organisation.	http://www.dlux.org.au/cms/
Halfbrick	An Australian game development studio founded in 2001, based in Brisbane.	http://www.halfbrick.com/
Holopoint Interactive	A digital media company established in 2007. Products in a range of industry sectors including marketing, entertainment and simulation. Based in Adelaide.	http://www.holopoint.com.au/
Krome Studios*	An Australian game development company founded in 1999. Originally based in Brisbane with offices in Adelaide and Melbourne, the company closed in late 2010.	http://www.kromestudios.com/
Micro Forté Studios	An Australian game development company founded in 1985. Locations in Canberra and	http://www.microforte.com.au/

	Sydney.	
Monkeystack	A 2D/3D visual effects and animation company. Based in Adelaide.	http://monkeystack.com.au/
Plasmo Mega Studios*	Begun solely to create the Plasmo animation television series, the company is now closed.	
QinetiQ	A leading international defence and security technology company. QinetiQ Australia was established in February 2008.	http://www2.qinetiq.com/home_austr.html
Sega Corporation	A multinational video game software developer and an arcade software and hardware development company headquartered in Japan. Sega Studios Australia was acquired in 2005 and is headquartered in Sydney.	http://www.sega-australia.com/
Simmersion Holdings	An Australian software development company, founded in 2002, focusing on real-time 3D simulation and visualization products and services.	http://www.simmersionholdings.com/
Sydac	An Australian developer of simulation-based engineering solutions to the transport, industrial and defence markets. Established in 1988.	http://www.sydac.com.au/
Team Bondi*	An Australian independent third-party game developer based in Sydney, founded in 2003. The business was placed into administration on 30 August 2011.	http://www.teambondi.com/
THQ*	A developer and publisher of interactive entertainment software. Headquartered in California. THQ Studio Australia in Brisbane started in January 2003 and then THQ acquired Blue Tongue Entertainment Pty. Ltd in Melbourne, in November 2004. Both Australian studios were closed on August 9, 2011.	http://www.thq.com/au
Torus Games	An Australian video games developer founded in 1994. Located in Bayswater, Victoria.	http://www.torus.com.au/
Visual Unity	An Australian company specialising in graphic design for retail and consumer environments. Based in Melbourne.	http://www.visualunity.com.au/
Wasabi Digital	An online creative studio providing web production services for the interactive industry. Based in Sydney.	http://www.wasabidigital.com.au/
WIN Television	An Australian television network owned by the WIN Corporation, based in Wollongong, New South Wales.	http://www.wintv.com.au/
* These companies were not currently operating as at November 2011.		