Embedding Graduate Skills
High-achieving Students: Workshop Model

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Abstract
This paper investigates a unique program developed at Macquarie University entitled the “Aspiring Professionals Program”. The program’s aim is to attract high-achieving students and to assist these students with the transition between university and their first job. In particular, this paper addresses the skills that graduates are frequently lacking, as reported by both recruiting organizations and in the literature. The particular needs of high-achieving students are considered, as well as the residential workshop method within which the program operates. The curriculum content and delivery are described and the results from the initial year are documented. In conclusion, plans to update and improve the program are considered.

Keywords: Graduate skills, Gifted students, Academic achievement, Higher education, Student development, School-to-work transition

1. Background and theoretical perspective
Historically, little has been done to attract or foster academically talented undergraduates at Macquarie University. Recently, the university initiated a program for high-achieving undergraduates with a focus on graduate skills. The program is called the Aspiring Professionals Program (APP). Participants include high-achieving students as identified by their final school results or their class results in their undergraduate program. Graduate skills – sometimes also referred to as generic skills, professional skills, attributes or capabilities in the graduate skills literature (Rigby et al., 2009) – is the central theme.

The aim of the program is to help academically talented students with the transition between university and their first corporate job. Many studies have focused on students’ transition between school and higher education (Perrone & Vickers, 2003). There appears to be less research on the transition into the corporate world, despite the fact that this change is also a major life transition (Clark, 2000). Some people may believe limited resources should be devoted to students who most need help; in fact, it is the talented students who provide a better rate of return on the investment of time and energy (Fredrickson, 1986, p. 556).

The program also aims to increase the attractiveness of the university to school-leavers. Rinn and Plucker (2004) note the increasing focus on the recruitment of academically talented students within higher education institutions. Their studies found the success and mindset of talented students improved the “academic atmosphere” (p. 54) and reputation of a higher education institution. They comment on the high demand for these students amongst higher education institutions through focused recruitment drives.

This paper briefly reviews the literature on high-achieving students as well as the graduate skills that hiring organizations expect their new recruits to be able to demonstrate. Next, this paper considers workshop and residential programs as the mechanism to learn graduate skills to inform “best practice” with respect to the design of the student experience of the program. The Aspiring Professionals Program curriculum and the results will then be described. Finally, future plans will be considered in light of the feedback received from participants.
1.1 High-achieving students

According to recent research (Reis & Renzulli, 2009a; Sternberg & Davidson, 2005), the definition of giftedness has broadened from innate characteristics to a wider definition. Specifically, for many years, decades even, giftedness has been defined solely as high IQ but with the recently expanded notion, a variety of traits, skills, abilities and demonstrated results are now included. With the multi-dimensions, diversity and overlapping concepts, high-achieving students may be considered as talented and gifted.

Research into gifted students has focused on elements such as how they select their career (for example Pfeiffer, Sampson, & Chason, 2008); multipotentiality (for example Rysiew, Shore, & Leeb, 1999; Wood, 2009); personality (for example Clark, 2000; Reis & Renzulli, 2004; Rinn & Plucker, 2004); and honors programs (for example Clark, 2000; Evans, 1967; Hebert & McBee, 2007; Rinn, 2004).

Regarding the preparation of individuals for the world and work in particular, Fredrickson (1986) suggests gifted students need “special help” (p. 556) partially because of society’s high expectations. He noted that while these students may be academically talented, it did not automatically mean they are skilled emotionally or socially. Yun Dai and Renzulli (2008) explain that gifted students sometimes experience a social-emotional (p. 123) separation or isolation from mainstream society as a result of the differences between them and their community. Hebert and McBee (2007) also note that honors programs provide students with an intellectual and social network with like-minded students. This is supported by other researchers such as Reis and Renzulli (2004), who note the positive development that results from learning with others who have similar capabilities, aptitude and motivations.

The transition from university to work is considered a major life transition (Graham & McKenzie, 1995) and even the highest caliber students may find it difficult (Perrone & Vickers, 2003). Holmes, Green and Egan (1998) argue that certain expectations regarding employment are created when students complete their tertiary education. It could be considered that high-achieving students may have even more inflated expectations. This was another reason to consider these students in particular.

1.2 Graduate skills

Vescio (2005) found that profession-specific knowledge was not sufficient for success in practice. Instead, a range of elements from emotional intelligence, cognitive capabilities and generic skills is considered vital. Vescio’s studies found that emotional intelligence dominated when considering skills for graduate success across the majority of multiple professions she investigated. In the literature, the concept of generic skills is vague and there is limited understanding or agreement regarding its importance (Freeman et al., 2008; Sin & Reid, 2005).

Some research highlights the concerns expressed by employers that graduates do not have the skills employers require (Arnold et al., 1999; Hills et al., 2003). Specifically, communication skills – written and verbal – are often lacking (Chamorro-Premuzic et al., 2010; Wells et al., 2009). Within the literature other skills are reported as lacking in graduates, including team skills, problem-solving and self-management skills (Hesketh, 2000; Wells et al., 2009), decision making and interpersonal relationships (Herremans & Murch, 2003; Knechel, 2000). Bridgstock (2009) reports on the value of self-management and self-understanding for graduates, and Sin and Reid (2005) suggest its importance for dealing with a largely unknown future and for building confidence. It may also assist with dealing with a labor market that is less predictable than it used to be.

Some degrees, such as those in Arts and Science, often do not address professional requirements for any specific job. As a result, generic, transferable skills are often intrinsically developed (Precision Consultancy, 2007). Contrast this with a degree from Actuarial Studies. Fallows and Steven (2000) suggest the application of graduate skills may impact graduates of vocationally focused degrees who are often the slowest to recognize the generic (graduate) skills gained during their higher education.

Candy and Crebert (1991) are critical of university programs where students learn in a regulated process, when conversely employers require individuals capable of creativity and flexibility and the ability to develop specific skills quickly to deal with new and unfamiliar situations. The difference between the structured, clearly defined university experience and the ill-defined ambiguous work environment is suggested as one reason for graduates experiencing transition difficulties. Candy and Crebert also comment on the different requirements around communication in the two environments – at university it is more formal and mostly written, while the work environment has many more opportunities for oral communication with superiors and informal interactions.

1.3 Workshop model

There is some debate about the benefit of homogenous versus heterogeneous groups in the education of the gifted (Neber, Finsterwald, & Urban, 2001). Evans (1967) suggests that there may be valid reasons to separate...
bright students and teach them as a homogenous group. He felt this would be beneficial because gifted students learn faster. He noted that education depends on the professors as well as the interaction of the peer group, which would be of a higher quality. Evans specifically suggests that gifted students should be provided with the opportunity to meet with other talented students to collaborate, share goals and interests, and to work together. He even recommends seminars on topics such as “conservation of resources” (p. 557). Residential environments and their impact on academic and social development are well researched: having students stay on campus, even for a short time, allows the development of a peer network and friendships and supports social development (Rinn, 2004).

Prince (2004) found active learning methods incorporate student engagement through thinking about what they are doing while participating in significant learning activities. The use of case studies is supported by Wells et al. (2009) who found that graduates believed exposure to real-world problems would be a key learning resource. Exposure to real or simulated situations provides the opportunity for teamwork skills to be learnt and employed as well as a hands-on, active learning approach to problem solving (Boyce et al., 2001). Exercises in this format provide students with the chance to practice communication skills in interpersonal relations while dealing with the complexities and ambiguities of a real-world scenario.

The use of the “jigsaw” technique (Aronson, 2010; Aronson & Patnoe, 1997; Wood & Dixon, in this Issue) in some exercises further contributes to shared learning. Reported activities that have employed this technique typically have been case studies. Each participant takes on the role of a stakeholder within the simulated situation, which allows students to become relative experts in that role. Working in small groups towards a common goal is known as collaborative learning and benefits include student engagement and positive student attitudes (Prince, 2004).

2. Description of the Program

2.1 Aim

The Aspiring Professionals Program (APP) was developed at Macquarie University for academically high-achieving students. The expectation was that this program would assist students in the development of their graduate skills in preparation for their career after graduating. Discussions with professional services firms who often recruit high-achieving students further confirmed that focusing on graduate skills would be valuable since they find these skills are often absent. Many of these firms start to address some of these skills shortages in their graduate development programs, which are facilitated in graduates’ first year of work. Recruiting professionals suggested that students who demonstrate an element of these graduate skills at the outset would be more likely to stand out from other applicants. In fact, some have gone so far as to suggest that a graduate with exceptional graduate skills would be more favorably viewed than a graduate with exceptional academic results but no graduate skills or social awareness.

The program aimed to improve oral communication skills, teamwork, critical thinking, reasoning and analyzing skills, as well as to provide career preparation skills such as resume writing and interview skills. There were three key focus areas: an initial stage that focused on the development of communication skills and coincided with students’ first year at university, followed by career development and finally, community focus in their second and third years of study.

The APP did not impact the involvement students had with other mixed-ability groups in the normal semester within the undergraduate curriculum. It ran in parallel to students’ degree requirements and they received no credit for participation. The program provided an additional opportunity to be further challenged when participating in specific APP workshops or seminars.

2.2 Selection of students

A somewhat simplistic, easily measured approach to identify high-achieving students to be a part of the program was adopted. Academically talented students were defined based on the Higher School Certificate results (awarded at the end of secondary education in Australia). At Macquarie University, these students were called Merit Scholars and were approximately the top 1% of all students. It was acknowledged that this definition would potentially result in some students being overlooked, such as students who do not match the school criteria for success; gifted underachievers (Reis & McCoach, 2000); and those whose diverse talents extended beyond academia (Reis & Renzulli, 2009b).

The majority of students with the top academic results were found to be in the Faculty of Business and Economics, specializing in actuarial science and accounting. It has been reported that these groups of students are often more vocationally focused at the expense of graduate skills. In 2010 the program was extended to Merit
Scholars across the entire university as well as other high-achieving students, with participation limited to invitation only. To remain in the program, students had to maintain a grade-point average of three or above. Students who completed the required courses were eligible to receive a certificate on completion.

2.3 Content and delivery

2.3.1 Phase one: Communication

The development of communication skills for first year students was run in workshops with ten participants. The workshops were one-day events and covered communication theory based on the work by Bolton and Bolton (2009). Communication skill development was also included together with a number of exercises to extend and enhance new skills. At the outset, students learnt about their own communication style before considering how they would tailor their communication efforts for different styles. Practical exercises were used to provide the opportunity to practice new skills. Participants had to communicate with someone in a different style to their own dominant style in a role-play scenario. They also had to identify the other person’s dominant style by reading others’ behavior, also through role playing. Other topics included were: generating rapport and how to do this quickly; body language; and the creation of perceptions and impressions. Content was discussed and exercises were used to embed new skills. For example, the creation of perceptions based on observable behaviors alone was discussed, and one particular behavior students identified was the way people physically present themselves. Reviewing and discussing perceptions and impressions allowed participants the opportunity to consider different perspectives.

2.3.2 Phase two: Career

The second theme focused on careers and skills to assist in the job-search process. These workshops were for all students in the APP and were held in two-hour blocks at different times throughout the semester. Facilitators were from the university’s career services and from industry. Topics included resume writing, interview skills, job-search skills, networking and workplace etiquette. An extension of the first interview skills workshop was provided and included mock one-on-one interviews which were recorded on DVD. Participants received feedback from the facilitator and were also able to review their DVD in their own time to receive additional objective feedback.

2.3.3 Phase three: Community

The community theme was addressed when students in their second or third year were invited to attend a two and a half day residential workshop on campus. The design of the workshop was developed from that of a graduate skills workshop (see www.graduateskills.edu.au for details) that was part of a larger project entitled, “Embedding the Development and Grading of Generic Skills into the Business Curriculum” (funded by the Australian Learning and Teaching Council). The event was held in the mid-year vacation. Numbers were limited to 25 students and most of these students stayed on campus for two nights. Initial activities focused on participants getting to know each other. Being a new program, and because the students were from different undergraduate courses across the university, these students had not had the opportunity to work together before this event. A number of icebreaker exercises were used for the first part of the workshop (see Kavanagh, Clark-Murphy, & Wood, in this Issue). The objective was to encourage interaction and a level of cohesion amongst participants before focusing on the development of generic skills.

There were four topics covered over the duration of the residential workshop: teamwork, sustainability, ethical practice and critical thinking.

Teamwork

The first day of the workshop, students were seated at tables in self-selected groups of five. Initially, teamwork theory was covered and included a definition of teamwork; the benefits and aims of working in teams; and different teamwork models. Other topics included mindfulness in teams as both individuals and as a team, relationships, interpersonal skills and the development of group dynamics as well as team formation. At regular intervals, groups were given the opportunity to embed what they had learnt through short, high-intensity learning exercises. Firsthand experiments gave participants the opportunity for the development of a team contract, negotiation of team roles, and the creation of teamwork rules. Teams were provided with a variety of challenges to resolve while dealing with conflict, competition and continuous change. Each exercise was followed by team debriefs and the opportunity to share their experiences with the wider group in a reflective discussion.

Sustainability

The groups were rearranged before the next theme, sustainability, which was addressed in the afternoon of the
first day. Teams were assigned randomly and time was provided to allow the team-building process to occur from the beginning, using the skills the participants had gained earlier that day. This provided another opportunity for students to embed new skills.

Theory was addressed at the outset to ensure a common understanding, then a case study was presented which represented a real-world scenario experienced by the Macquarie University Sustainability Office. The scenario focused on gaining engagement and communication across the campus. Each of the five groups played the role of a discrete university. The jigsaw technique (Aronson, 2010; Aronson & Patnoe, 1997; Wood & Dixon, in this Issue) was employed, and each participating group played the role of a university stakeholder which allowed students to become experts in that role. Students who played the same stakeholder from each “university” then converged and were provided with information about the situation from the perspective of the role they were playing. Participants playing the same roles (albeit from different universities) then discussed their points of view on the scenario and with sustainability theory in mind. Students then reconvened with the other stakeholders at their “own” university and were able to discuss and present the viewpoint of the role they were playing to the rest of their peers. This exercise was followed by a team discussion and debrief about team functioning.

Ethical practice

Ethical practice was introduced on day two and followed the same design as was used for the sustainability topic. Participants were provided with a case study and a limited time to work together to solve the ethical dilemma they had been given. As an example, one case study addressed the bank bail-outs during the global financial crisis (further examples are available on the Graduate Skills website at www.graduateskills.edu.au). Students were expected to use ethical frameworks they had been introduced to within their solution, and to consider all the stakeholders in their determination of ethical practice. Discussions within each team were followed by presentations by each team to the larger group regarding their case study and their suggested solutions. Discussion and debate from the audience was encouraged.

The workshop concluded with a final debrief, and reflection on the relevance of the material addressed and the value of the new skills participants had developed.

3. Results

In this section, results from each of the phases of the APP will be presented in terms of the feedback received from participants.

3.1 Phase one: Communication

Students reported the communication skills workshops to be interesting, useful and a “positive experience”. Most participants commented on the value of understanding and interacting with different types or styles of communication as a key take-away. They found the opportunity to practice new skills immediately after learning the theory to be particularly valuable. Many commented that communicating can be harder than they expected, especially if the other person’s communication style was very different to their own. Some students expressed the desire to address topics like interview techniques and resume writing at this early stage of their higher education (they were all first year students).

3.2 Phase two: Career

Students were unanimous in their enjoyment of career development activities and mock interviews and stated they would recommend the workshops to other students. Interview preparation and understanding body language within an interview were listed as highly valuable. Some students expressed the desire for more information on body language as well as possible interview questions and appropriate answers. The opportunity to mix with other high-achieving students was also noted and enjoyed.

3.3 Phase three: Community

The residential workshop was considered by all who attended – academics and students – to be a success. Students commented on the value of working with others who were similar to them. One student said: “[One of the best things was] being with like-minded students who bounced discussion off one another in a supportive environment.”

Teamwork

Students’ positive comments regarding teamwork was one particular highlight, with one participant saying one of the best things about the program was “learning about the psychology of teams and how to work effectively within them to achieve a result”. Some students expressed their surprise at how much they enjoyed working as a
team. These students reported that their experience of teamwork within their courses had been frustrating because team members had different goals – some just wanted to pass while merit scholars often wanted high marks. Working in teams within the workshop was a very different experience and one student reported, “my perspective on groups and group work has changed significantly.”

**Sustainability**

Initially, students displayed some discomfort at having to move into a different team for the sustainability exercise. Having spent a morning with one team, developing an understanding of each other and their roles, there was some disappointment and even anger at having to work with a new team. Later, after the initial hard work of creating a new team environment, students were glad to have had the opportunity to re-form and create a new team, practice their new team-building skills and meet other people.

Participants were motivated to engage in the exercises in part because the case studies were based on real-world scenarios that provided a new level of realism to their learning. The jigsaw method also ensured there was little place to hide and the majority participated actively. The opportunity to play the role of different stakeholders was challenging and allowed students to begin to learn the value of empathy.

**Ethical practice**

Students were able to gain a solid understanding of some of the intricacies and ambiguities of making decisions in the real world via the ethics case studies. One student commented that the topics were “very relevant examples, post-GFC”. Students interacted with each other when they communicated their positions within their teams, and interpersonal skills were enhanced by debating different views and listening to others’ opinions. This gave them another opportunity to practice their communication skills and develop negotiation skills.

Several significant outcomes resulted from the program’s initial year. Student feedback was overwhelmingly positive and participants valued the opportunity to meet and share time with each other. Facebook groups have been created and participants have reported that they plan to maintain the network they have developed. Skills have been developed and multiple opportunities to practice and use these skills have been experienced.

4. **Discussion**

New considerations need to be weighed to address the ever-changing nature of the world of work and career development that graduates are facing. In keeping with Bridgstock (2009) – who contends that a wider skill set should be recognized with particular focus on lifelong career development skills – a review of core concepts for the program has been undertaken. Some changes to the material have been identified and will be implemented in the upcoming year.

Firstly, the selection of students who participate in the program will be reviewed. Using academic results is an easy and quick way to determine who to invite, which was the reason it was used. However, as discussed, giftedness extends beyond a high IQ. The aim is to develop a more flexible selection or identification process that includes the broad range of characteristics now included in the definition of giftedness (Renzulli & Reis, 1991).

With respect to the content of the program, there are several planned changes, and there will be three key themes as shown in Figure 1.

The first phase will be expanded to include more than just communication skills. The topic will be changed to “self” and will encompass more general skills and awareness about individuals and self-development. Topics to be included are goal setting, personality style, general communication skills and self-management skills such as mindfulness, time management, managing conflict, giving and receiving feedback. The aim is to help develop these students as individuals before focusing on other graduate skills in subsequent workshops.

The second phase of “career” will remain and be expanded to include greater interaction with a variety of organizations in different sectors. One plan is to develop a series of programs entitled “What do you do all day?”, where professionals from different industries share the minutiae of their day-to-day work. It is expected that this would increase awareness of our program amongst corporations and the public and so stronger links with industry and large-scale employers of graduates will be developed. The aim is to further develop the ideas and needs of hiring organizations to ensure the program is relevant and valuable for everyone involved.

Many students who participate in the APP are completing double degrees over more than three years. It is envisaged that the fourth year students will be invited to mentor or coach workshop activities as well as other students, which should help them to enhance their leadership skills (Gonsoulin Jr., Ward, & Figg, 2006).

Finally, further feedback will be sought from high-achieving students who are transitioning into work to better
understand their challenges and experiences. Two groups will be interviewed: those who have had access to the APP and those who have not. The aim is to better understand students’ needs from their perspective as well as to better understand the impact of the program on graduates’ transition.

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References


Figure 1. The Aspiring Professionals Program Model