# Southern Regional Hub-funded project



A RESOURCE GUIDE FOR PROGRAMME COORDINATORS/DIRECTORS & LEADERS

## Supporting healthy student cohort formation

Professor Philippa A. Martin Dr Anne K. Soutter Associate Professor Erik Brogt





This resource has been developed as part of the "Assisting the Formation of Inclusive Engineering Cohorts" project by Philippa A. Martin, Anne K. Soutter, and Erik Brogt, University of Canterbury, with project co-funding from Ako Aotearoa.

Download all five project resources free from: https://ako.ac.nz/knowledge-centre/ assisting-the-formation-of-inclusive-engineering-cohorts/

Published by Ako Aotearoa New Zealand's Centre for Tertiary Teaching Excellence PO Box 756 Wellington 6140 www.ako.ac.nz 0800 MYAKONZ info@ako.ac.nz

November 2021



This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. To view a copy of this license, visit http://creativecommons.org/ licenses/by-nc-sa/4.0/ or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

# Supporting healthy student cohort formation

A resource guide for programme coordinators/directors and leaders

### Introduction

A cohort is a (year) group of students who take most or all their course work together during their studies and have common academic experiences (e.g. internships). Cohorts are common in tightly prescribed programmes such as engineering, education, nursing, and law. A cohort can become a true learning community through careful curriculum integration, program coherence (shared curriculum and assessment planning as well as connected courses), shared responsibility and teaching team collaboration. This requires leadership beyond the individual course level, with programme design and coordination across courses and years, and potentially with integration of academic and social events.

Three common aspects of learning communities are (Tinto, 2003):

- Shared knowledge: A shared coordinated and coherent curriculum is used so that students take courses together on a given theme.
- Shared knowing: Students get to know each other through shared classes as they construct knowledge together. Learning communities encourage social and intellectual involvement.
- Shared responsibility: Collaborative groups create an atmosphere where students are mutually dependent on each other, in turn becoming responsible to each other.

In this resource guide report, we outline ways learning community leaders / directors / coordinators can ensure that the cohort develops to be supportive, constructive and inclusive to all. A separate resource guide is available for your teaching staff.

### Climate check baseline data

The New Zealand Tertiary Education Strategy (TES) (New Zealand Ministry of Education Te Tāhuhu o te Mātauranga, 2021) requires not only that New Zealand tertiary providers deliver world class inclusive public education, but also that they provide barrier free access to education for all learners. If you are leading an existing programme, it will be important to identify existing barriers to the formation of inclusive cohorts (Zhao & Kuh, 2004). This can be done in a variety of ways, e.g. student surveys or focus groups, staff surveys or focus groups, event participation data, observations of teaching situations and learning environments, examining roles in group dynamics, and the like (Wenzel, 2003). Tools can be found in (Mills, Ayre, & Gill, 2010), (Moore, Brantmeier, & Broscheid, 2017) and (Brantmeier, Broscheid, & Moore). If you are collecting data, then make sure to include a wide range of demographic variables, allow multiple selections (allowing for intersectionality and multiple identities) and check assumptions (Simmons & Lord, 2019), (Secules, Sochacka, & Walther, 2018) and (ASEE). If you work at an institution that has educational developers on staff, they will typically be able to assist

you with this process. Human resources may be able to assist with looking at the inclusivity of hiring processes and the diversity of staff and tutors hired for the program delivery. Research shows that appointing and developing Māori staff is an important way to support Māori student success and the bicultural goals of the institution (Greenwood & Te Aika, 2009).

#### Academic programme coordination

Consistency and coherence across the different courses in the programme is key to reducing student cognitive load, and creating a sense of community and cohort. This can be done through a variety of ways:

- Consistency in online presence of courses through using templates. This will make course material easy to find in similar manners in each course.
- Consistency in course organisation: weightings and timings of assessment across courses, consistent use of intended learning outcomes, etc.
- Consistency in teaching approach, e.g. by all instructors using a growth mindset (rather than a "you either have it or you don't" fixed mindset) in student interactions, modelling the behaviours we wish to see in our students (being aware of the role model function we have as staff).
- Consistency in assessment philosophy, e.g. with a focus on learning rather than on memorization or algorithmic knowledge (Eschenbach, Virnoche, Cashman, Lord, & Camacho, 2014), clear guidelines and detailed rubrics available for students (so they know what they are being held accountable for), and positive language (e.g. "late submissions are eligible for 80% of the marks" (invitation) instead of "late submissions will receive a 20% reduction" (command)).
- Focus on inclusion and diversity, e.g. in examples (can all students see themselves in the examples), teaching staff hires and invited guest speakers (can students see themselves represented in staff and guests).
- Consistency in approach to group work, teaching students how to effectively and respectfully work in groups, and managing student group dynamics (e.g. diverse teams, mindful of people not falling into stereotypical roles within a group, etc.)
- Meaningful and everyday use of Te Reo Māori and tikanga Māori, eg. greeting with "kia ora" or "tēnā koutou", farewell with "ka kite", well-being check with "kei te pēhea koutou?" (how are you all?), share kai (food), use mihimihi (introductions) and ending courses with poroporoaki (opportunity to farewell) (Hall & Jerram).
- Listen to the student voice in curriculum decisions (Hargraves).

#### Social programme coordination

Social events or combined social / academic events can be a powerful connecting force to help form an inclusive and healthy cohort, and foster a sense of belonging and community. This is true in particular early on in the cohort formation. However, it is recommended that these events are largely optional. In many cohort programmes, the academic workload is high, and adding social events to a full calendar is not necessarily a good thing from a student pastoral care and stress management perspective. In addition, students will have other personal, family and whanau commitments. One approach is to have social components to orientation, reorientation, presentation events and assignment demonstrations / events, such as inter-year shared lunches and morning / afternoon teas. Lower year cohorts can learn about future assessment and upper year cohorts can have an audience at their event.

Some examples of what could be done and what to keep in mind when organising such events are given below:

- Invest in orientation and welcome events to help create a sense of community.
  - Opportunity for students in and between cohorts to mingle, and for students to get to know the teaching staff and programme leadership.
  - Communicate expectations in terms of behaviours and as staff, model them (e.g. the importance of learning and correctly pronouncing names and using the correct pronouns).
  - Provide details on how to contact staff and where to go for support.
- Ensure that social and social / academic events are in inclusive places that can be reached easily by all students. Think about the inclusivity of the time and day of events.
- When organising social events, having food available tends to increase attendance. However, ensure that there are non-alcohol related events, as not all students are comfortable in that environment, for personal, health, or religious reasons. Dietary labels should be included with served food. Catering needs to consider the personal, religious and health constraints of the group.
- Coordinate with existing student groups to increase participation in department / programme related events, and work toward supporting student group activities.

### **Physical spaces**

Having shared spaces (permanent or scheduled) is an important way to increase interaction and build a sense of community among the students. It is particularly important for smaller cohorts who can get lost in larger cohorts if the courses are shared. Ensure that the physical spaces are inclusive, e.g. look at whether there are any posters or other visual cues that may trigger stereotype threat (Eschenbach, Virnoche, Cashman, Lord, & Camacho, 2014), and that clear rules for use are in place. The physical space needs to communicate that all are welcome and valued.

#### Training, advocacy, and student voice

- Time invested in working with staff in developing a shared set of behaviours / approaches to model to students is well worth the time. Training opportunities for teaching assistants / casual teaching staff in terms of inclusion and diversity, and their role in promoting the vision of the programme is also important (Simmons & Lord, 2019).
- Set up explicit expectations to have the student voice heard in individual courses and facilitate regular meetings with the student representatives at the cohort / programme level.
- Set up advocacy, equity and diversity groups and committees (Simmons & Lord, 2019) to provide feedback and continuous evaluation on the programme.

• Peer-led support through student clubs and mentoring schemes can help improve access (Simmons & Lord, 2019). Departments can play a role in funding and supporting such groups. If the support group is oriented around a single marginalised identity, then care needs to be taken to acknowledge multiple identities and systems of oppression that members might be experiencing or be able to relate to (Secules, Sochacka, & Walther, 2018).

#### Engineering experiences and industry engagement

In the following, we use engineering as an example of a vocational program. However, we argue that the work is applicable to other fields and invite colleagues to explore how these results are relevant in their teaching context.

Students are more likely to persist if they know an engineer or have had exposure and meaningful experiences with engineering (Pierrakos, Beam, Constantz, & Johri, 2009). For example, (Pierrakos, Beam, Constantz, & Johri, 2009) (Han, Cook, Shuman, Mason, & Turns, 2018) (Meyers, Ohland, Pawley, Silliman, & Smith, 2012):

- Role models: Providing positive and diverse role models for students, in the form of staff, students (current and recent graduates) and external speakers. What we call engineering students matters. By simply calling them engineers we may be able to increase their connection to engineering and reduce isolation.
- Shared vision: create a hub of engineering activity, where staff, students and engineers from industry can share ideas and experiences in order to cultivate identities as engineers. Connect to companies as well as professional groups.
- Reflective faculty: increase interaction with industry. This could go as far as staff spending time in industry, but could also involve having an industry advisor to help staff and students bridge the gap between courses and industry practices.
- Industry relevant curriculum and pedagogy: incorporate current industry practice into the curriculum. Try to have activities that actually mimic what engineers would do in industry. Consider vertically integrated courses employing experiential learning and containing significant industry content. Allow students from different years to work on projects together.

#### Community and Whānau connections

It is important to involve whānau / family in the learning community from the start (Tomoana, 2012). There needs to be thought to providing opportunities for whānau to engage with the program from the time of recruitment right through to graduation (Tomoana, 2012).

#### References

- ASEE. (n.d.). ASEE LGBTQ+ Advocacy in STEM. Retrieved October 2020, from Ally resources:
  - https://docs.asee.org/public/LGBTQ/Inclusive\_Classroom\_Strategies\_2019.pdf
- Brantmeier, E., Broscheid, A., & Moore, C. S. (n.d.). Inclusion by design: Survey your syllabus and course design. Retrieved from http://bit.ly/inclusionbydesign
- Eschenbach, E. A., Virnoche, M., Cashman, E. M., Lord, S. M., & Camacho, M. M. (2014). Proven practices that can reduce stereotype threat in engineering education: a literature review. Frontiers in Education Conference. Madrid, Spain.
- Greenwood, J., & Te Aika, L.-H. (2009). Hei Tauira: Teaching and learning for success for Maori in tertiary settings. Ako Aotearoa.
- Hall, M., & Jerram, K. (n.d.). A guide to teaching Maori content in University courses. Retrieved August 20, 2021, from Centre of Academic Development, University of Victoria of Wellington: http://www.cad.vuw.ac.nz/wiki/images/1/1c/TeachingM%C4%81oriContentboo klet.pdf
- Han, Y.-L., Cook, K. E., Shuman, T. R., Mason, G., & Turns, J. A. (2018). Engineering with engineers: revolutionizing engineering education through industry immersion and a focus on identity. ASEE Annual Conference and Exposition. Salt Lake City, UT.
- Hargraves, V. (n.d.). Seven principles to effectively support Māori students as Māori. Retrieved August 24, 2021, from The Education Hub: https://theeducationhub.org.nz/seven-principles-to-effectively-supportmaori-students-as-maori/
- Meyers, K. L., Ohland, M. W., Pawley, A. L., Silliman, S. E., & Smith, K. A. (2012). Factors relating to engineering identity. Global journal of engineering education, 14(1), 119-131.
- Mills, J. E., Ayre, M., & Gill, J. (2010). Guidelines for the design of inclusive engineering education programs. Australian Learning and Teaching Council (ALTC).
- Moore, C. S., Brantmeier, E., & Broscheid, A. (2017, September 18). Inclusion by Design: Tool Helps Faculty Examine Their Teaching Practices. Retrieved from Faculty Focus: https://www.facultyfocus.com/articles/course-design-ideas/inclusionby-design-tool-helps-faculty-examine-teaching-practices/
- New Zealand Ministry of Education Te Tāhuhu o te Mātauranga. (2021, August 2). The Statement of National Education and Learning Priorities (NELP) and the Tertiary Education Strategy (TES). Retrieved from https://www.education.govt.nz/ourwork/overall-strategies-and-policies/the-statement-of-national-educationand-learning-priorities-nelp-and-the-tertiary-education-strategy-tes/
- Pieratt, J. (2019). 3 steps to supporting the crusade for better student collaboration. ASCD Express, 14(22).
- Pierrakos, O., Beam, T. K., Constantz, J., & Johri, A. A. (2009). On the development of a professional identity: engineering persisters vs engineering switchers. 39th ASEE/IEEE Frontiers in Education Conference, (pp. M4F-1 - M4F-6). SanAntonio, TX.

- Secules, S., Sochacka, N., & Walther, J. (2018). New directions from theory: implications for diversity support from the theories of intersectionality and liberatory pedagogy. CoNECD. Crystal City, Virginia, USA.
- Simmons, D. R., & Lord, S. M. (2019, Spring). Removing invisible barriers and changing mindsets to improve and diversify pathways in engineering. Advances in Engineering Education, 1-22.
- Tinto, V. (2003). Learning better together: the impact of learning communities on student success. Higher Education Monograph Series, Higher Education Program, School of Education, Syracuse University(2003-1), pp. 1-8.
- Tomoana, R. (2012). Sharing successful teaching and learning strategies for Maori, Pacific and youth learners: The Whitireia way 2012. Ako Aotearoa.
- Wenzel, T. J. (2003, July 1). Controlling the climate in your classroom. Analytical Chemistry, 311A-314A.
- Zhao, C.-M., & Kuh, G. D. (2004, March). Adding value: learning communities and student engagement. Research in Higher Education, 45(2), 115–138.



