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# Collaborative Processes in the Development of the International Competences for Undergraduate Psychology (ICUP) Model

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## ABSTRACT

Across all nations, undergraduate psychology programmes aim to promote the acquisition of foundational psychology competences. Yet, until recently, a universally recognised model outlining essential competences did not exist. The International Collaboration on Undergraduate Psychology Outcomes (ICUPO) addressed this gap by developing the *International Competences for Undergraduate Psychology (ICUP)* Model. The aim of this article is to provide guidance about how other groups might successfully approach similar efforts to delineate discipline-specific key competences. We describe the processes that led to the development of the *ICUP* Model, framed by group development theory (Preparing, Forming, Storming, Norming, and Performing Stages), with additional consideration of individual ICUPO Committee member psychological needs for *competence*, *relatedness*, and *autonomy*. Each group development Stage section (a) describes project activities relevant to the characteristics of that Stage, and (b) lists key strategies employed and lessons learned, as well as commentary on psychological needs. To further enhance the value of this endeavour, the Discussion includes (a) commentary on the strengths and limitations of these theories for understanding and enhancing the effectiveness of such project processes, and (b) actionable insights for educational leaders undertaking similar projects.

## 1 | Introduction

In this paper, we describe the processes that led to the *International Competences for Undergraduate Psychology* (*ICUP*) Model. We first provide background to the *International Collaboration for Undergraduate Psychology Outcomes* (ICUPO) project. Then we discuss, within the context of psychological theory, the collaborative methodology involved in developing the *ICUP* Model. Finally, we discuss the outcomes and theoretical framing of the project, and provide recommendations for educational leaders planning to achieve a similar goal.

The reasons for undertaking the ICUPO project relate to: (a) the growing numbers of psychology programmes worldwide;

> (b) …a set of international ***professional*** psychology competences for the training of professional

For affiliations, refer to page 10.

> psychologists had been delineated, but a set of undergraduate-focused ***foundational*** psychology competences, taking into account multiple stakeholders given diverse employment destinations and potential community impact, had not been delineated; and (c) the requirement in the construction of competence models . . . to look to current and future needs (including pressing societal issues relating to human behaviour . . . ) (Nolan et al. 2025c, 14).

In the context of the ICUPO project, we acknowledge differences among nations on some key factors. First, the aims of undergraduate psychology programs range from general/liberal arts and sciences education (e.g., USA: American Psychological Association 2023) to pre-professional training (e.g., Europe: Lunt et al. 2011) to professional training (e.g., Brazil: de Souza and Gauer 2018), and some programs have more than one of these aims. Relatedly, the duration of undergraduate programs ranges from three (e.g., UK: Quality Assurance Agency for Higher Education 2023) to 5 years (e.g., Brazil: de Souza and Gauer 2018). Second, for those programs with one of the first two aims, estimated percentages of graduates who enter graduate psychology programs range from 14% in the USA (American Psychological Association 2017), to 48% in Australia (Bond et al. 2022), to 83% in Italy (Alma Laurea 2019). This situation highlights undergraduate psychology's broad categories of stakeholders (students, graduates, employers in diverse fields, diverse communities; Nolan et al. 2025c). Third, there is variation in whether there exists a national *psychology-specific* quality regulatory agency (e.g., 'yes' in Australia: Australian Psychology Accreditation Council 2019; optional guidelines only in the USA: American Psychological Association 2023; 'no' in India: A. Kumar, personal communication, 24 October 2022).

Given these international differences, there is an increased need to delineate common foundational psychology competences to (a) support international communication via a common language, (b) facilitate understanding of similarities and differences in curricular quality assurance and improvement, and thus (c) promote curricular harmonisation within regions, and (d) promote mobility of students, graduates, and educators. From psychological literacy and global citizenship perspectives (Cranney et al. 2022a, 2022b; Nolan et al. 2025c) there is a need for increased recognition by all stakeholders that graduates can use foundational psychology competences to achieve personal, work, and community goals. Additionally, there is increasing pressure in many nations, partly due to pandemic-related financial cutbacks, to reduce unit and programme offerings, such that the integrity of psychology undergraduate programs is threatened. The existence of an international undergraduate foundational psychology competence model may help education leaders to protect programs from quality erosion, particularly in the face of ignorance by university administrators, governments, and the general public regarding the value of undergraduate psychology education (e.g., Halonen 2011).

Professional psychology competences were developed by the International Project on Competence in Psychology (International Project on Competence in Psychology (IPCP), n.d., 2016). This process involved a committee of 10 members from nine nations who began meeting in 2013. The IPCP defined professional psychology competence as a "Combination of practical and theoretical knowledge, cognitive skills, behaviour, and values used to perform a specific behaviour or set of behaviours to a standard, in professional practice settings associated with" an advanced professional psychology role (based on IPCP, 2016, 4). The IPCP (2016) delineated four 'super' competence categories, 12 competence categories, and 42 competences. The IPCP gained endorsement from the International Association of Applied Psychology and the International Union of Psychological Science in 2016 IPCP, n.d.). The IPCP project was not funded by any particular organisation, with committee members sourcing their own funds to attend meetings (D. Iliescu, personal communication, 24 October 2022). ICUPO purposely (a) attempted to follow a similar process, and (b) invited two IPCP members to be members of the ICUPO Committee partly to learn from their experience. This paper describes the processes that led to the *ICUP* Model, which has seven competence categories, and 24 competence statements (see Figure 1; Nolan et al. 2025c).

Gaining agreement on this Model was both challenging and rewarding, taking over 12 months. We describe the substantial cultural challenges and opportunities during the *ICUP* Model development in a separate paper (Cranney et al. 2025a). Here, we focus on structures and group processes, referring to two psychological theories: group development theory (Tyson 1998) and the Basic Psychological Needs sub-theory of Self-Determination Theory (Ryan and Deci 2000; Ryan et al. 2022), allowing group-level and individual-level analyses, respectively. These theories were not explicitly discussed during the first 12 months of this project, but they shaped the organisational strategies of at least some Committee members.

Tyson (1998) describes characteristics that contribute to a 'group'. These characteristics include group members interacting with each other in pursuit of a common goal, and sharing group identity, values, and norms (see Supporting Information for more detail). Many of the operational processes in this project were designed to promote these group characteristics (see Supporting Information: Terms of Reference; Team Processes; Meeting Processes). Tyson (1998) also points out that "processes that underlie the development of a team fall into two realms that continuously seek to co-exist with as little conflict as possible" (p. 5): *Task*, which involves goal-oriented activities, and *Maintenance*, which involves good social relationships and a sense of wellbeing.

Tyson (1998) also reviewed group process theories and integrated features of these theories into a revision of Tuckman (1965) 'life-cycle' theory of group development, which includes the stages described below, adapted for our context. Tyson noted that all theorists recognised that transition from one stage to the next is usually gradual and not strictly linear.

- ***Preparing***: Group members form expectations about the group and their role in it (e.g., derived from information they have about the group purpose and processes before the first meeting).

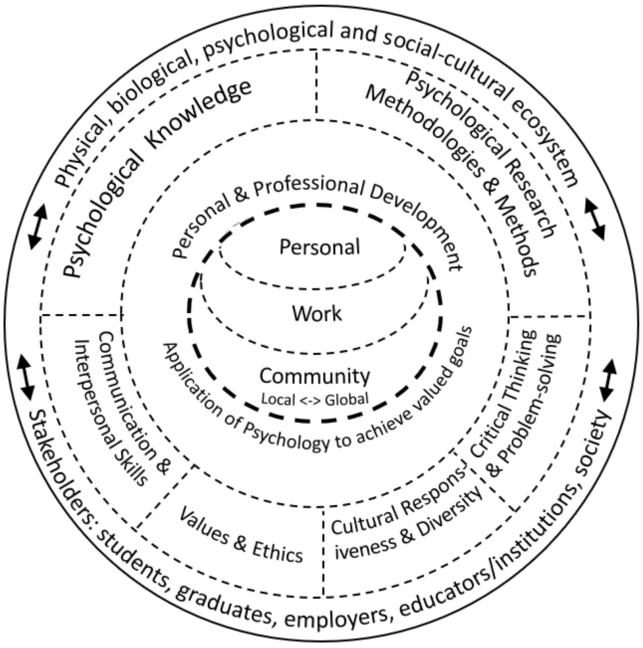


**FIGURE 1** | *International Competences for Undergraduate Psychology (ICUP)* Model. This figure emphasises the wide range of stakeholders, given that graduates of undergraduate programs in many countries go on to a wide range of careers. There are two core competence categories, *Psychological Knowledge* (1) and *Psychological Research Methodologies & Methods* (2). There are also five psychology-relevant competence categories (*Values & Ethics* [3]; *Cultural Responsiveness & Diversity* [4]; *Critical Thinking & Problem-solving* [5]; *Communication & Interpersonal Skills* [6]; *Personal & Professional Development* [7]). All seven competence categories interact with each other. Numbering is primarily for convenience in referring to competence statements. In this figure, psychology-relevant Personal and Professional Development is in the centre, emphasising the importance of students' future lives and goals. This placement also represents a socio-ecological perspective (Bronfenbrenner 2005). From "International Collaboration of Undergraduate Psychology Outcomes (ICUPO): Figures and Tables", by Nolan et al. (2025b). Copyright 2025 by the International Collaboration on Undergraduate Psychology Outcomes Committee; permission to use Figure 1 granted on 8 March 2025.

- ***Forming***: Members may be cautious during the first meetings, as they learn more about the leader(s), other members, main goals, and strategies for achieving those goals.
- ***Storming***: Processes may slow as individual members assert their agendas regarding sub-goals and strategies. Conflicts arise and members may continue to assertively engage, or withdraw.
- ***Norming***: If group members successfully handle the conflicts, they may have a renewed sense of optimism that facilitates intra-group cooperation, establishing more detailed norms, roles and procedures, and becoming more independent of the leader(s).
- ***Performing***: Members successfully perform tasks that enable a balance between the Task and Maintenance realms, and are capable of dealing with problems as they arise. Members' different skills and resources contribute to achieving group goals.
- ***Adjourning***: This involves acknowledgment of goal achievement, coping with the psychological consequences of termination of the group work, and planning for the future.

In addition, we report how engagement in this project may have satisfied (individual members') three basic psychological needs, as specified in the Basic Psychological Needs Theory (Ryan and Deci 2000): *competence*, the sense that one can complete valued tasks; *relatedness*, the sense that one is cared for by others; and *autonomy*, the sense that one has choice in what goals one pursues and how one pursues those goals. The satisfaction of these needs leads to a sense of wellbeing (Ryan et al. 2022), which Tyson (1998) indicated is an important feature of the Maintenance realm. In addition, although a sense of satisfaction of all three needs is important to a sense of overall wellbeing, in different situations, some needs are more likely to be satisfied than others, and one should keep this in mind across the different Stages of Group Development. We now describe the ICUPO project processes with reference to these two theories, thus providing frameworks to guide other educational leaders interested in achieving similar aims.

Before doing so, however, as stated in Cranney et al. (2025a):

> . . . we must acknowledge our own 'position' with respect to this work. The co-authors have diverse personal and professional backgrounds (ranging from neuroscience to clinical, organisational, community, and Indigenous psychology). Our methodological approaches also vary . . . What unites us is a vision to shape international foundational psychology competences to help address the needs of graduates, employers, and communities. (p. 6)

## 2 | Methods and Results: ICUPO Structures, Processes, and Outcomes

### 2.1 | Overview

The organisational structure of ICUPO comprises the ICUPO Committee (originally, 17 members from 13 countries; 2 additional members, each from an additional country, later joined the Committee) and the *International Reference Group on Undergraduate Psychology Outcomes* (IRGUPO; 101 members from 45 countries). Given its international nature, almost all meetings have been virtual. Following the establishment of basic processes, working groups, and terminology, members agreed on the need for a set of principles for drafting competences. Two draft competence model 'options' were developed by individual Committee members, followed by a process of integrating these models. Stakeholder feedback, particularly from IRGUPO, was vigorously sought, and continuing revisions were undertaken (Nolan et al. 2025c).

Figure 2 presents the ICUPO Process Model, reflecting simplified initial (Gantt 1) and later (Gantt 2) project timelines, activities, and sub-goals of the project. As can be seen, durations of the initially planned phases of the project have approximately doubled, with greater overlap of phases over time. Group stages are

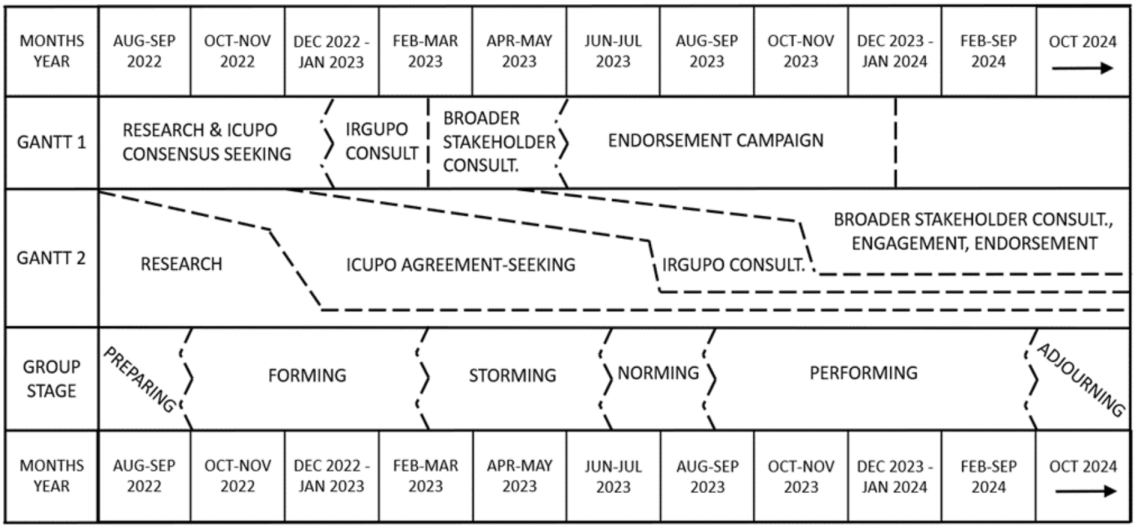


**FIGURE 2** | Process model of the International Collaboration on Undergraduate Psychology Outcomes (ICUPO) project. For clearer visual representation, the top and bottom rows consist of 2-month interval blocks (except for the last two blocks). From the top, the second row represents the simplified expected main phases in the September 2022 Gantt chart (Gantt 1); the third row represents what has occurred or is occurring/expected to occur at February 2024, with a more realistic indication of the overlap of phases (Gantt 2) and a greater emphasis on stakeholder engagement; the fourth row depicts the progress of ICUPO according to the group development stages. From "International Collaboration of Undergraduate Psychology Outcomes (ICUPO): Figures and Tables", by Nolan et al. (2025b). Copyright 2025 by the International Collaboration on Undergraduate Psychology Outcomes Committee; permission to use Figure granted on 13 January 2025.

mapped against Gantt 2. Table 1 in the Supporting Information document presents highlights of the major ICUPO activities in relation to Tyson (1998) stages of psychological development that a group experiences as they work successfully through various challenges. We next discuss these stages and associated project activities, key strategies employed, and lessons learned.

## 2.2 | Preparing Stage

The primary activities during this Stage were: formation of the project idea by the co-leaders; acquisition of small grant funding; invitation to potential ICUPO Committee members; establishment of online infrastructure and some initial procedures; and assignment of introductory tasks prior to the first meeting. Consistent with group development theory (Tyson 1998), these activities were designed to facilitate group member engagement, particularly by helping them to form accurate expectations about the group, their role in it, and the likelihood of success in those roles (relevant to their sense of *competence* and *relatedness*). Informal feedback from Committee members suggests there was some success in the formation of accurate expectations (except for the timeline). We provide some descriptive detail here that could usefully illustrate these characteristics for readers undertaking similar projects (see Supporting Information for more detail).

In the 2 months prior to the first ICUPO Committee meeting, the co-leaders, who were released from standard faculty duties, focused on initiating the project. Based on international experiences, contacts, and literature, the co-leaders identified and invited potential Committee members, and those who accepted were from Aotearoa–New Zealand, Australia, Brazil, Cameroon, Canada, China, Germany, Japan, India, Italy, Romania, the UK, and the USA, and later, from Mexico and the Philippines.

Simultaneously, co-leaders established infrastructure and drafted a Gantt chart (see Figure 2 for a simplified version) setting out the project processes. They determined procedures for inclusive collaboration: alternating times of day to accommodate different time zones; recording ICUPO meetings; assigning pre-meeting tasks to facilitate input from non-attendees; rapidly distributing meeting minutes; and storing essential materials in shared drives. The pre-meeting tasks for the first ICUPO meeting included: (a) introducing self (contributing to a sense of intra-group *relatedness* and thus also to the Maintenance realm); (b) responding to specific questions about core papers, to facilitate a common 'starting point' of *competence*; (c) co-creating group norms and goals (contributing to senses of *autonomy* and *competence*); and (d) answering questions about their national context, including contributing to a spreadsheet of national or institutional undergraduate psychology programme learning outcomes (thus allowing expression of national disciplinary identity, as well as providing data for further tasks).

What were the strategies used, and lessons learned, that could be of value to readers undertaking a similar project?

1. Allow significant time to plan and initiate the project (i.e., before the work of the group really begins).
2. Ensure diversity among team members; establish procedures that facilitate access (e.g., well-organised and easily accessible file storage; alternative access options) and involvement (e.g., multiple avenues for input), with an emphasis on cultural responsiveness (Cranney et al. 2025a).
3. Establish procedures that will help balance and satisfy members' needs for *competence*, *relatedness*, and *autonomy*.

## 2.3 | Forming Stage

The primary activities during this Stage were: initial ICUPO Committee meetings during which pre-meeting task responses were summarised and discussed, and three working groups were formed (thus developing *competence*); establishing consensus regarding key terminology (e.g., 'foundational psychology competence'; Nolan et al. 2025c); on-going collaborative determination of methods/processes including gaining consensus on team procedures (essentially, co-creating group norms, which involves balancing needs for *relatedness* and *autonomy*); initial research and mapping regarding outcomes, and initiation of the drafting of competence categories and statements; initiation of and engagements with the advisory group, IRGUPO. As Tyson (1998) indicates is common in this Stage, members were likely cautious as they learned more about other group members, the main goals, and strategies for achieving those goals. As before, we provide some descriptive detail here that could usefully illustrate these characteristics for readers (see Supporting Information for more detail).

At the first Committee meeting, co-leaders reported a summary of responses to the pre-meeting tasks, so that members could understand the similarities and differences among members and countries (building *competence* and *relatedness*). ICUPO Committee members ("we") determined 3 working groups (WGs), led by different Committee members: the Terminology Working Group (T-WG), the Process Working Group (P-WG), and the Outcomes Working Group (O-WG), to undertake tasks between the monthly Committee meetings. We prioritised specific WG tasks depending on the stage of the project. WGs worked in parallel and kept all informed of their progress. In essence, there was an interrelated and cyclic nature to the interactions among the WGs and the Committee.

All Committee members were invited to join any of the WGs, and to attend WGs whenever they wanted (thus supporting *autonomy*). It should be noted that both project co-leaders have an inclusive leadership style, in that they encourage belonging while simultaneously valuing uniqueness (Randel et al. 2018; i.e., balancing *relatedness* and *autonomy*). They were confident in the capacities of the WG leaders and believed that distributing leadership roles would increase ownership and thus greater effort expended towards achieving the ICUPO goals.

The P-WG was tasked with both the minutiae of ICUPO processes (e.g., the Committee meeting agendas) and the development of project-wide strategies such as publication (thus facilitating the Task realm and supporting *competence* building). The P-WG has also been concerned with building the Maintenance Realm (and thus *relatedness*) and has developed meeting strategies to encourage members' contributions. Examples of strategies are: (a) strong support for using the Chat function, (b) sharing saved Chats, and (c) asking for a '30-s thesis' (at the end of each ICUPO meeting, each attendee briefly talks about whatever they want regarding the project—thus also supporting *autonomy*). The P-WG has developed into the indispensable 'engine room' of ICUPO, meeting one or 2 weeks prior to each ICUPO meeting. A key factor within the operations of this WG has been its responsiveness to feedback from other WGs, Committee and IRGUPO members, and other stakeholders.

The first formal engagement with IRGUPO members was initiated in December 2022, and involved some similar tasks to that initially given to Committee members. One task requested adding information to the National Outcomes spreadsheet. This resulted in a total of 27 national listings, forming the basis for some of the 'bottom-up' ICUPO tasks where, for example, Committee members were asked to scan all 27 listings and answer these questions: "What are the current similarities across nations… What are the current differences across nations… What similarities should there be that do not currently exist across all nations…". The 'top-down' activities/tasks emphasised competence categories and asked members to review regional and national psychology undergraduate competence models. These exercises helped us to identify similarities and differences across national outcome models in the lead-up to the February 2023 Committee meeting. For this meeting, we attempted to depict the actual and projected project progress (see Figure 3).

What were the strategies used, and lessons learned, that could be of value to readers undertaking a similar project?

1. Group members collaborate in creating and revising group norms to facilitate clear expectations and promote intra-group harmony (thus promoting individual member *autonomy* and *relatedness*).
2. Group meetings include feedback on tasks assigned since the last meeting, thus recognising the value of that work, providing feedback, and promoting project progress (thus promoting individual member *competence* and *relatedness*).
3. Inclusive and distributed leadership processes are encouraged, and opportunities are provided to help balance and satisfy all members' needs for *autonomy*, *competence*, and *relatedness*.
4. Group leaders consider different methodological approaches suggested by group members and, if accepted, seek to coordinate these approaches and integrate findings.

## 2.4 | Storming Stage

The primary activities undertaken during this Stage were: the development of the *Principles for Drafting Competences*; the drafting and then integration of two model options; conference/workshop events at national and international conferences where feedback was sought and integrated into Model revisions; a highly systematic consultation with IRGUPO members regarding an early version of the Model; and a positionality discussion led by an Indigenous expert. According to Tyson (1998), this Stage is characterised by conflicts as individual members assert their agendas regarding sub-goals and strategies (asserting need for *autonomy* versus for *relatedness*), and progress may slow. As before, we provide some descriptive detail here that could usefully illustrate these characteristics for readers (see Supporting Information for more detail).

In the early phase of drafting competence statements, two competence model options started to emerge. It became clear

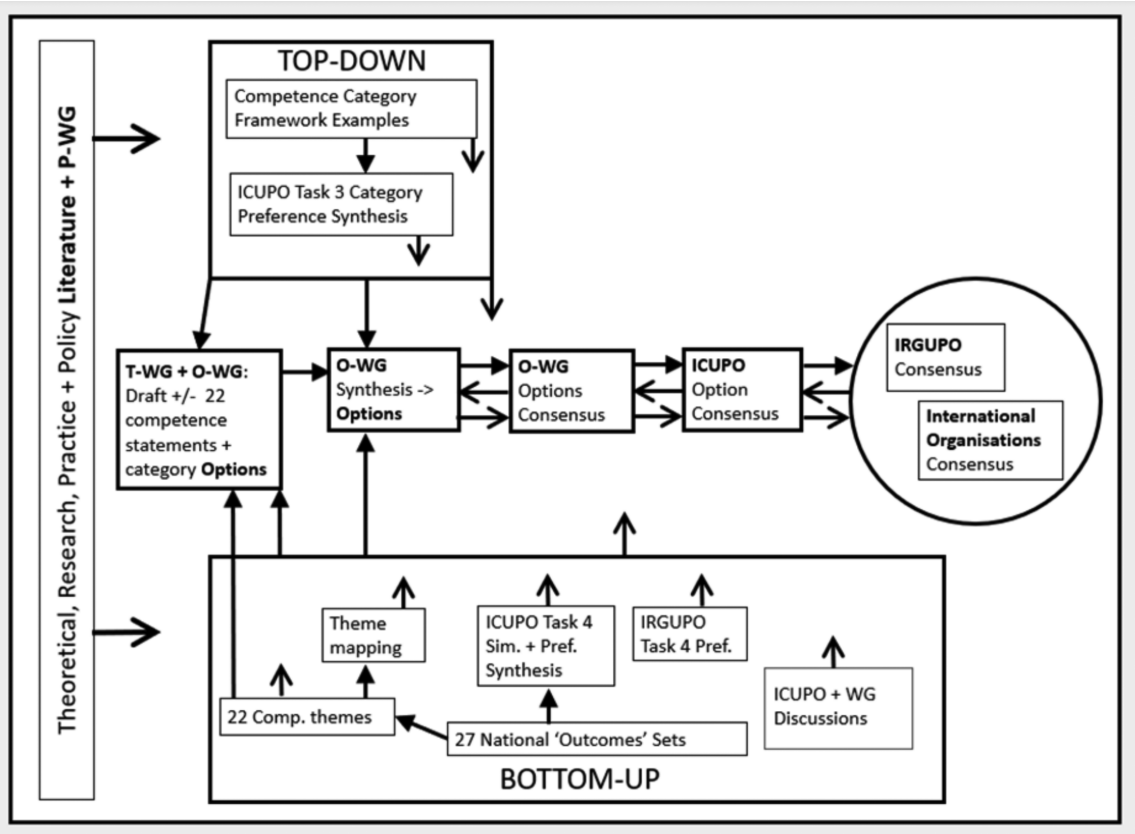


**FIGURE 3** | Scholarly, collaborative and consultative processes in the development of the *International Competences for Undergraduate Psychology (ICUP)* model. *Source:* Depiction of progress at the February 2023 Committee meeting (then: The central square box on the left), and planned steps towards international consensus, including the work of O-WG toward internal consensus, then ICUPO Committee and IRGUPO consensus, and finally, endorsement by international organisations. To the far left are the primary ongoing inputs, as described in more detail in the Supporting Information. Top-down inputs are represented at the top of the diagram, and bottom-up inputs at the bottom. Comp. = Competences; ICUPO = International Collaboration on Undergraduate Psychology Outcomes Committee; IRGUPO = International Reference Group on Undergraduate Psychology Outcomes; Task 4 Pref. = responses to category preference question; O-WG = Outcomes WG; Sim. = Similarities; T-WG = Terminology WG; WG = Working Group. From "International Collaboration on Undergraduate Psychology Outcomes (ICUPO): Figures and Tables", by Nolan et al. (2025b). Copyright 2025 by the International Collaboration on Undergraduate Psychology Outcomes Committee; permission to use Figure granted on 13 January 2025.

through robust discussions that Committee members held different perspectives regarding how competences should be drafted (assertion of need for *autonomy*). Thus, we drafted the *Principles for Drafting Competences* (Nolan et al. 2025c), and finalised this document after receiving feedback from IRGUPO members (prioritisation of need for *relatedness*).

We engaged in continual efforts to merge the two draft model options. As this process was deemed too slow, the Integration Working Group (I-WG) was formed to undertake this work, somewhat independently of the model option creators. The Alpha[1] Version of the *ICUP* Model was tentatively approved for discussion at the European Society for Psychology Learning and Teaching (ESPLAT) conference in June 2023.

Thereafter, robust debate regarding the overall structure and specifics of the Model continued. Some ICUPO Committee members were happy with the existing Model and frustrated that the ICUPO project was now extending months past its original deadline (see Figure 2); others wanted to again debate alternative competence model structures.

Meanwhile, we had returned to an earlier 'positionality' task crafted with extensive input from an Indigenous ICUPO Committee member. We were asked to respond to a series of questions about how our personal and professional roles, identities, and related power, influenced our thoughts and actions in professional contexts. Then, the Indigenous Committee member, with an IRGUPO colleague, led a discussion on positionality. This led to: (a) increased clarity for us as to why we are involved (tapping into the need for *autonomy*); (b) increased sensitivity to positionality and cultural responsiveness, that has been critical to on-going relationship building (*relatedness*); and (c) increased awareness of the need to be more inclusive in our thinking and move beyond dominant Western paradigms in psychology and psychology education (building *competence*).

What were the strategies used and lessons learned that could be of value to readers undertaking a similar project?

1. Despite considered and continual implementation of inclusive and transparent project processes, conflicts are likely to arise, and so group leaders must be prepared to design and implement transparent strategies that may not please

all group members, but will allow the project to progress in a relatively inclusive manner (i.e., sometimes privilege *relatedness* over *autonomy*).

2. Group leaders construct opportunities for group members to reflect on the reasons for why they are involved in the project, and how their past experiences shape their behaviour in the project.

3. Group leaders provide opportunities to help balance and satisfy members' needs for *autonomy*, *competence*, and *relatedness*.

## 2.5 | Norming Stage

The primary activities undertaken during the putative Norming Stage were: the creation and enactment of procedures for Model revisions; agreement regarding the first revision (Alpha.R1); revision of the Gantt chart and the enactment of more efficient work processes; structured consultation with IRGUPO regarding the Model. According to Tyson (1998), if group members have handled the conflicts of the Storming Stage, the Norming Stage is characterised by: a renewed sense of optimism that facilitates intra-group cooperation; relatedly, establishment of more detailed norms, roles and procedures; and some independence from the leader(s) (all reflecting growth in *competence*, and a balancing of *autonomy* and *relatedness*). As before, we provide some descriptive detail here that could usefully illustrate these characteristics for readers (see Supporting Information for more detail).

The factors that contributed to making progress beyond the Storming Stage were: (a) frequent references to the *Principles for Drafting Competences*; (b) frequent references to positionality and cultural responsiveness, emphasising a need to be inclusive of non-Western worldviews (see Cranney et al. 2025a); (c) an urgency to decision-making imposed by a series of upcoming conference presentations; and (d) when necessary, a switch from seeking consensus within the Committee (as depicted in Figure 3) to majority agreement (as reflected in Figure 2 terminology). Thus, although members may not have been happy with every decision, they accepted the majority opinion (*relatedness* vs. *autonomy*). Clearly, group norms were evolving to support progression towards ICUPO's goals.

For the first time, IRGUPO members were formally asked to give their quantitative (various ratings) and qualitative (answering open-ended questions) feedback on the Alpha.R1 Model. Note that it is possible that ICUPO Committee members may have felt some obligation to conform with the natural group norm to 'own' that Model (involving senses of *relatedness* and *competence*). The IRGUPO survey data were anonymised, and a document was created which gave the summary quantitative statistics, and the Committee's response to each of the open-ended responses, including whether and how the Model would be changed. Prior to finalisation of the next revision, IRGUPO members were also invited to meet with the co-leaders about the document. These strategies signalled the valuing of the IRGUPO input.

In terms of group development theory, as mentioned in the Introduction section, the group development stages are not necessarily linear, and during this Norming Stage there was some continued 'storming'. For example, some ICUPO members expressed that the work-load was too demanding, including the intense frequency of Committee meetings. As a result, several changes were made. In terms of Basic Psychological Needs theory, by this stage of group development (given the nature of the inclusive project processes and our collaborative willingness to modify such processes when needed), enough *relatedness* and trust had been built that individuals felt that they could express their opinions (*autonomy*), and that their voices would be heard and acted upon. Part of the *competence* building involved members' gaining more knowledge of each other's needs and behaviours, so that we could better anticipate such, and negotiate compromise solutions.

What were the strategies used, and lessons learned, that could be of value to readers undertaking a similar project?

1. At meetings, have a regular 'safe space' that allows any member to express their concerns and suggestions regarding processes and products; allow adequate time to explore their concerns, brainstorm possible solutions and make decisions; act quickly to implement those decisions to make progress towards addressing those concerns.

2. Despite the intention to use collaborative decision-making whenever possible, there are often time pressures where this approach is not possible, and so the group needs to revert to less optimal strategies such as placing time limits on each member's input and then formally voting on a motion.

3. During the development of a product such as a model of educational competences, informal and formal opportunities for input from stakeholders should be embraced and systematically considered, with subsequent feedback to stakeholders.

4. Group leaders provide opportunities to help balance and satisfy group members' needs for *autonomy*, *competence*, and *relatedness*.

Essentially, if the processes are transparent and there is the willingness to change procedures when necessary, then individual project members' net needs for autonomy, competence, and relatedness should be adequately met, leading to a sense of well-being, which in turn supports motivation to continue working towards project goals (Bahrami and Cranney 2018; Sheldon and Houser-Marko 2001).

## 2.6 | Performing Stage

The primary activities undertaken during this Stage were: presenting about the *ICUP* Model at conferences; further feedback leading to revisions, with the Beta versions being made available as preprints on an open platform (https://osf.io/6y38x/); and the further development and implementation of engagement, publication, and dissemination strategies. According to Tyson (1998), during the Performing Stage and the pursuit of group goals, (a) members perform tasks that enable a balance between the Task and Maintenance realms, (b) members' different skills and resources are optimally utilised, and (c) members are capable of dealing with problems as they arise. As before, we provide some descriptive detail here that could be useful for readers (see Supporting Information for more detail).

Opportunities to present about the *ICUP* Model were purposefully sought out or constructed by different Committee members in their specific national and international contexts. For example, the project co-leaders initiated the *Wellington Workshop on Undergraduate Psychology* in Aotearoa New Zealand, attended by the majority of the nation's Heads/Chairs and undergraduate directors of Departments/Schools of Psychology. Presentation of the ICUPO project provided a stimulus to productive discussion, in the context of significant pressures to change their programs. At later conferences, when there was more agreement and confidence among ICUPO members regarding the value of the *ICUP* Model, it became apparent that working together to present and lead discussion had a positive compounding effect. That is, the natural need to present a successful project meant that ICUPO members minimised differences in opinion and maximised a 'united front' in communicating a positively progressing project (building *relatedness* and *competence*). Another shift during this phase of conference presentations was the involvement of multiple members of the Committee and IRGUPO in each presentation, usually a mixture of face-to-face, live online, and pre-recorded co-presentations. This required more organisation but usually gave a greater international feel to the presentations, and was a way of acknowledging multiple member inputs to the project (further building *relatedness* and *competence*).

The involvement of some Committee members was predicated on peer-reviewed publications (sometimes an expectation of their institutions); thus, developing the publication strategy was a priority. Co-leaders sought out publication opportunities and, although challenging, writing with large groups of co-authors has built both *relatedness* and *competence* for co-authors. In addition, some types of publication have involved *autonomy*, for example, in choosing and writing case studies to illustrate *ICUP* competences (e.g., Nolan et al. in press a, in press b).

What were the strategies used and lessons learned that could be of value to readers undertaking a similar project?

1. Once there is an initial version of the intended product, engage with stakeholders (if you have not already) to garner their feedback, and constructively consider and act on that feedback in the further refinement of your intended product.
2. Group leaders and members create/take opportunities to disseminate project outcomes to key stakeholders, and simultaneously build on any collaborative effort involved to progress project goals.
3. Group leaders provide opportunities to help balance and satisfy group members' needs for *autonomy*, *competence*, and *relatedness*.

## 3 | Discussion

### 3.1 | Outcomes of the ICUPO Processes

The primary output of the ICUPO processes is the *ICUP* Model, currently in preprint format (Nolan et al. 2025c), as well as presentations at psychology conferences, departments of psychology, and psychology associations in Aotearoa-New Zealand, Australia, Czech Republic, Germany, India, Mexico, Serbia, Sweden, the UK, and the USA (ICUPO, n.d.). We have been preparing publications (e.g., Nolan et al. 2025a) and other dissemination products. One of the clear outcomes has been the collegial relationships formed among the Committee and IRGUPO members, which already have had impacts (e.g., keynote speaker invitations). Some members also feel a sense of intellectual rejuvenation as a result of this unique collaborative activity. Another related and critically important outcome is the increase in capacity for reflexivity and cultural responsiveness that many Committee members have experienced and believe to be integral to the success of the ICUPO project; we discuss this in a separate paper (Cranney et al. 2025a). As we write this paper, it is too early to measure the impact of the *ICUP* Model, given that the first preprint was made public in October 2023. Suggested strategies for assessing *ICUP* impact include: counting citations of *ICUP* publications; analysing the nature of impact in government or university documents that cite the Model; and surveying psychology departments regarding *ICUP* influence on curriculum revision.

### 3.2 | Lessons Learned Regarding the Theoretical Framing

In this paper, we have attempted to communicate the processes involved in producing an international competence model in ways that may be useful to educational leaders with similar aims. In doing so, one strategy was to frame the ICUPO processes in terms of group development theory (Tyson 1998) and Basic Psychological Needs Theory (Ryan and Deci 2000). That is, although the processes are obviously contextualised to *foundational psychology* competences, the theoretical framing should enhance generalisation to other educational contexts. The question then arises as to the robustness of the theories; that is, what is the weight of evidence for these theories? For Basic Psychological Needs Theory, at least, the answer is: 'highly robust' across multiple contexts (Ryan et al. 2022). A key message from this project is for group leaders to be flexible in providing opportunities to satisfy group members' needs for *autonomy*, *competence*, and *relatedness*.

With regard to group development theory, with this project, it could be argued that rather than the stages being sequential, there was interaction between the stages, as previously discussed. Such iterative interaction is one of the positive reasons for the delay of the project. Moreover, our experience suggests that there may be multiple parallel minor 'group staging' occurring as new tasks are taken on (i.e., recursive loops among the forming, storming, norming and performing stages); nevertheless, by the Norming Stage, the core group had formed enough knowledge and trust of each other's capacities that any 'staging' was not experienced as an insurmountable barrier. Indeed, we came to admire each other's perseverance, despite adversities and competing demands on time. For example, there was a high tolerance for the 'cannot spend time on this right now' admissions by individual members—we had all experienced this situation. Importantly, there were other members of the Committee who could 'fill the gap' and get the job done, even if this involved having to extend project deadlines. As one member commented, project progress would not have been possible without members'

strong commitment to ICUPO's goals, the achievement of which requires intense perspective-taking, empathy, (self-)compassion, and cultural responsiveness (Cranney et al. 2025a). Consequently, although we are all looking forward to the 'adjourning' stage[2] of this project, because then we will know that most of the core work has been completed, in another sense, we will miss our camaraderie, including productive 'storming'.

Overall, one lesson from this endeavour is to make explicit early, one or two theoretical frameworks that could help guide the work of the project. For example, an explicit group development theory framing may help members 'weather' challenging 'storming' times. Although a simplistic framing of the project in terms of the Stages did not perfectly describe the complex dynamics of the ICUPO project work, we believe that such framing could be usefully duplicated in similar projects. Note that in each Stage section above, various procedural 'lessons learned' have been summarised.

### 3.3 | Limitations and Caveats

Of course, not all members of the Committee were able to significantly engage with the core work in a sustained way, usually because of competing demands of higher priority. Despite this, the core group also appreciated the unique constructive contributions of each of the other Committee members. Nevertheless, one might ask, what more could have been done to better engage these other Committee members? One strategy has been for the co-leaders to reach out to some of those members for occasional one-to-one meetings. This strategy has been very productive.

We note the limitation that the group development and Basic Psychological Needs theories are of Western origin, and future work should purposefully apply relevant non-Western frameworks. Another limitation that should be acknowledged is the degree of national representation. Apart from our original strategy of asking ICUPO members to suggest potential candidates, multiple strategies were put into place to increase representation across nations and other forms of diversity. We added 21 additional IRGUPO members in early 2023, including from underrepresented countries (i.e., Cameroon, China, India, Kenya, Malaysia, Philippines, Serbia, South Africa, USA [from a Historically Black College or University (HBCU)]), and members from previously unrepresented countries (i.e., Colombia, Croatia, Ghana, Indonesia, Nigeria, Pakistan, Singapore, Turkey, Uganda). There are now 101 IRGUPO members from 45 nations, and across both the Committee and IRGUPO, there are 120 members from 47 nations. In late 2025, there will be a new wave of invitations to potential IRGUPO members.

### 3.4 | Recommendations

Based on the experience of the ICUPO project, the following are general recommendations for those planning a similar higher education competence model project. See also the specific 'lessons learned' in each Stage section, and the Limitations section above.

1. Be aware of relevant evidence-based theories (including from the organisational psychology and non-Western literatures) relevant to effective group processes. Make the chosen theories explicit early in the project.
2. Use existing competence frameworks (from global to local, as well as from generic to domain-specific) to inform the processes of developing and structuring the competences.
3. Determine one full-time project leader, or two compatible co-leaders with a significant block of time to work together relatively exclusively on the project. Add a dedicated small group of committee members willing to undertake significant work, which will be critical to the project's success.
4. Ensure that there are incentives (e.g., publications, shared projects, and shared values) for committee members.
5. Proactively create contingency plans for the project to take at least twice as long as initially planned.
6. Arrange multiple inclusivity mechanisms for the entire project duration. This is especially significant for international collaborations.
7. Stimulate committee members to stay aware of their positionality and be willing to continuously develop their capacity for cultural responsiveness.
8. Be open to using new and existing technological tools while considering inclusivity and accessibility factors, and ensuring that the technology supports rather than supplants the main project aims. Some examples are software for qualitative data analysis, video conference platforms, cloud storage, sharing platforms, and generative artificial intelligence.
9. Create, from the beginning, formal and informal mechanisms for external and internal review of processes.

### 3.5 | Conclusion

Within the space of approximately 12 months, ICUPO successfully engaged psychology educators from approximately 40 nations in collaboratively producing the first public preprint of the *ICUP* Model. The processes involved in producing that output can be framed in terms of group development theory (Tyson 1998), with reference at the individual level to Basic Psychological Needs theory (Ryan and Deci 2000). On-going strategies include: (a) formally engaging with psychology-relevant organisations regarding the relevance of the *ICUP* Model to their goals; (b) disseminating the ICUPO products, including through websites (International Collaboration on Undergraduate Psychology Outcomes (ICUPO), n.d.; https://osf.io/6y38x/), peer-reviewed publications, conference presentations and social media; (c) identifying, developing, and disseminating practical educational strategies that develop and measure the competences (see Cranney et al. 2025b); and (d) encouraging and supporting, at national and institutional levels, consideration of the feasibility of utilising the *ICUP* Model in curriculum development and revision. We assert that adoption or adaptation of the *ICUP* Model in national and local curricular contexts should improve the quality of undergraduate psychology outcomes for all stakeholder groups.

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### Consent

The authors have nothing to report.

### Conflicts of Interest

The authors declare no conflicts of interest.

### Endnotes

[1] The various draft versions of the integrated ICUP Model were named using the Greek alphabet, starting with Alpha, through Beta, to the current Gamma. Each alphabet renaming of a draft signalled a significant change of some kind; however minor revisions attracted 'suffixes' of R1, R2, and so forth. (= Revision 1, Revision 2 etc.), for example, Beta.R1.

[2] In early 2024, when this manuscript was submitted for publication, it was anticipated that this project would enter the Adjourning Stage by the end of 2024. During 2024, intense consultation with psychology organisations and leaders, as well as international conference presentations, produced feedback that led to further revisions. In addition, several opportunities for the publication of manuscripts on various aspects of the ICUPO project, as well as research projects, emerged. This means that the 'Adjournment Stage' is likely to be delayed until, at the earliest, late 2026.

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## Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Data S1** Supplementary Information.