

INTRODUCTION



Figure 1: Multidisciplinary Collaboration in Practice

Healthcare practice is a system of multi-disciplinary teams working together towards a common aim: the best possible care. There has been an emphasis in undergraduate education in recent years for healthcare students to be involved in interprofessional education (IPE) from the outset. The Centre for the Advancement of Interprofessional Education (CAIPE) defines IPE as occurring “when two or more professions learn with, from and about each other to improve collaboration and the quality of care.” There is a lack of consistency with how IPE is developed, delivered, and assessed in terms of students’ learning, and whether or not it benefits healthcare students in the broader context of patient care. Without rigorous evaluation of the effectiveness of IPE programmes, it is difficult for faculty to establish whether students are prepared for collaborative practice. A range of statistically validated tools have been developed to provide a measure of IPE outcomes. Various tools, or instruments, can be used to gain an insight into the impact of IPE on, for example, attitudes towards IPE, role perceptions of other healthcare professionals, and team or collaborative skills.

AIMS

The aim of this research was to identify validated tools used to quantify IPE outcomes and to determine the suitability of each identified tools for use in the evaluation of IPE programmes involving pharmacy students.

METHODS

An literature search was performed to identify recent research into IPE measurement tools. Results included a report titled “An Inventory of Quantitative Tools Measuring Interprofessional Education and Collaborative Practice Outcomes”, produced by the Canadian Interprofessional Health Collaborative (CIHC), which provided a list of tools to quantify IPE outcomes. We adapted, updated and re-ran this search to identify tools published since 2012. Relevant data was extracted (e.g. primary focus, setting) from each primary reference source. Tools were assessed based on their suitability for longitudinal research, strength of development, length and stage of education. Tools were deemed suitable/unsuitable for evaluating IPE activities for pharmacy students by consensus within the research team.

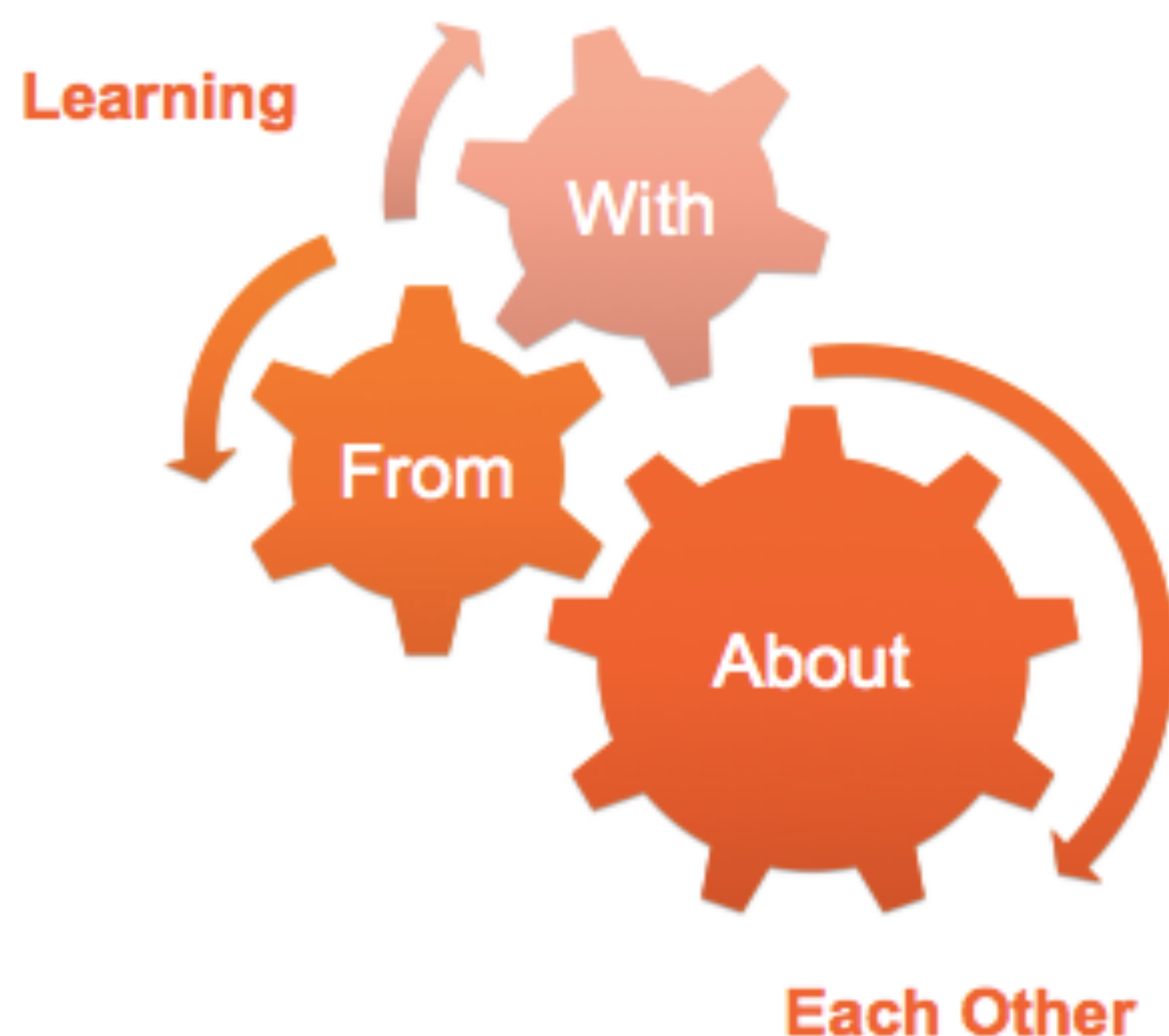


Figure 2: CAIPE definition of IPE

RESULTS

Following an assessment of the quantitative tools described in the CIHC report according to specified inclusion and exclusion criteria, seven relevant and accessible measurement tools were identified.

The updated search generated 842 results. 82 results were removed as duplicates and 575 results were excluded by title. Of the 185 remaining abstracts, 69 relevant abstracts were selected. Abstracts were deemed relevant if they described a validated quantitative tool measuring outcomes of IPE in accordance with the specified tool inclusion and exclusion criteria. A total of 12 quantitative tools were identified, nine of which had not been previously mentioned in the CIHC report.

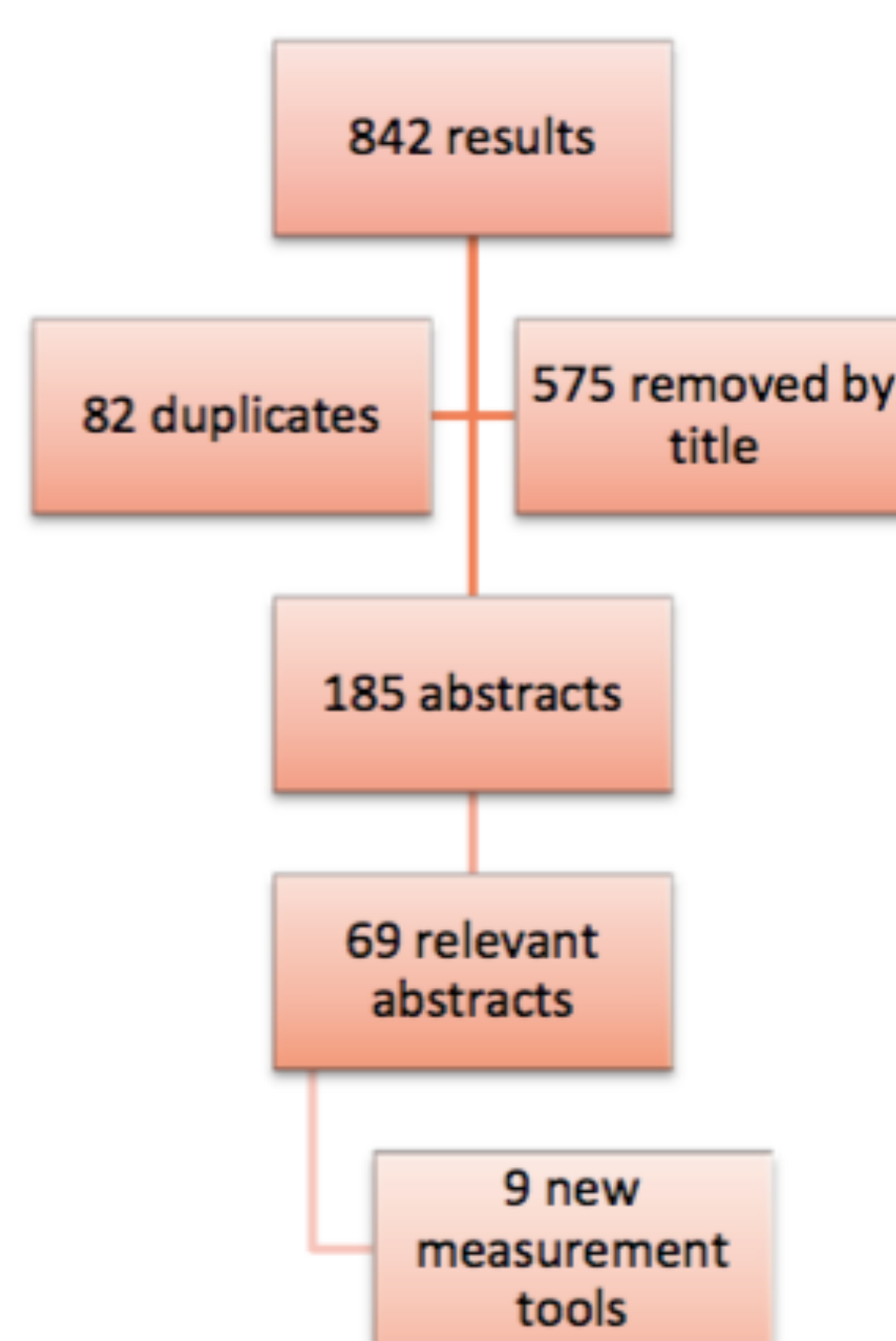


Figure 3: Search Strategy

The relevant data from the total 16 tools generated by the literature search were tabulated (Table 1) and the data extraction tool (Table 2) provides an assessment of each.

Tool	Author	Primary focus
CHIRP	Hollar et al 2012 (US)	Measure attitudes towards interdisciplinary teamwork
ICAR	Curran et al 2011 (Canada)	Assessment of interprofessional collaborator competencies
ICCAS	MacDonald et al 2010 (Canada)	Measure the self-reported competencies of interprofessional care in IPE programs
IESS	De Oliveira et al 2015 (US)	Assess students’ engagement and attitudes towards IPE
JeffSATIC	Hojat et al 2015 (US and Australia)	Measure attitudes toward IPC in health profession students and practitioners regardless of their professions and areas of practice
SATP ² C	Lon et al 2011 (US)	Measure pharmacy students’ attitudes toward physician-pharmacist collaboration, and compare those attitudes of medical students
SPICE	Zorek et al 2013 (US) Update: SPICE2	Measure changes in pharmacy and medical students perceptions following an IPE experience
SSRQ	Hean et al 2016	Stereotype ratings that students gave of professional groups other than their own
W(e) Learn	MacDonald et al 2010	A quality standard and a guide to design, develop, deliver and evaluate IPE in both pre- and post-qualification educational settings

Table 1: Extract of the Inventory of Measurement Tools

Tool	Length and Scale	Measures			Development	Years for use
		Attitude	Roles	Team		
CHIRP	36 items, 5 point scale	N	N	Y	+++	4 th -5 th & PG
ICAR	31 items, 4 point scale assessment rubric	N	Y	Y	+++	4 th -5 th & PG
ICCAS	20 items, 7 point scale	Y	N	N	++	Any
IESS	10 items, 4 point scale	Y	N	Y	N/A	Any
JeffSATIC	20 items, 7 point scale	Y	N	Y	+++	Any & PG
SATP ² C	16 items, 4 point scale	N	Y	N	+++	Any & PG
SPICE	10 items and 3 factors, 5 point scale	Y	Y	Y	+++	Any
SSRQ	9 characteristics rated on 5 point scale	N	Y	N	+++	Any
W(e) Learn	30 items, 7 point scale	Y	N	N	++	Any

Table 2: Extract of the Data Extraction Tool

Of the 16 validated measurement tools reported, nine were considered suitable to assess IPE outcomes for pharmacy students.

DISCUSSION

The evaluation of IPE programmes in undergraduate healthcare settings is critical in ensuring these activities promote a positive attitudinal and behaviour change towards multidisciplinary collaboration.

The inventory of tools presents a convenient overview of each instrument identified. The data extraction tool will allow quick identification of the various properties of each measurement tool. While all tools identified were deemed appropriate for longitudinal evaluation, each varied in the aspect(s) of change measured e.g. attitudes towards IPE, role perception of various healthcare professional, and/or interprofessional team skills.

Choosing a suitable tool to evaluate an IPE event should be based on the learning outcomes, as well as the strength of the validated tool. This project will provide a reference source for those wishing to evaluate an IPE event.

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