



Interprofessional Education (IPE) Student Outcomes

- Theory of Planned Behavior
 Many institutions use attitudinal and perception surveys to measure IPE outcomes. Although outcomes from these surveys cannot predict behaviors, educators use the Theory of Planned Behavior¹ to support the use of these validated instruments. If the decision to change behavior is directly related to a change in attitudes and beliefs,¹ using instruments, such as the SPICE-R2² throughout an academic journey provides insight to IPE curricula impact.

SPICE-R2 Questions	Factor
Working with students from different disciplines enhances my education.	Teamwork (TW) (Score: 4-20)
Participating in educational experiences with students from different disciplines enhances my ability to work on an interprofessional team.	
Health professional students from different disciplines should be educated to establish collaborative relationships with one another.	
During their education, health professional students should be involved in teamwork with students from different disciplines in order to understand their respective roles.	
My role within an interprofessional team is clearly defined.	Roles/Responsibilities (RR) (Score: 3-15)
I have an understanding of the courses taken by, and training requirements of, other health professionals.	
I understand the roles of other health professionals within an interprofessional team.	
Patient/client satisfaction is improved when care is delivered by an interprofessional team.	Patient Outcomes (PO) (Score: 3-15)
Healthcare costs are reduced when patients/clients are treated by an interprofessional team.	
Patient/client-centeredness increases when care is delivered by an interprofessional team.	

*1-5 Likert Scale (1=Strongly disagree, 5=Strongly agree)

All Students Pre-Year 1

	TW	RR	PO	Total	
Cohort 2017	17.93	11.43	12.92	42.15	(n=478) 4 semesters
Cohort 2018	17.98	11.29	12.96	42.23	(n=552) 4 semesters
Cohort 2019	18.17	11.26	12.94	42.37	(n=762) 2 semesters
Cohort 2020	18.15	11.14	12.70	41.99	(n=741)

All Students Post-Year 1 (Post-Retrospective Pre)

	TW	RR	PO	Total	
Cohort 2018	-0.16	1.31* medium	1.77* small		(n=552) 4 semesters
Cohort 2019	1.11* small	2.15* large	0.92* medium		(n=762) 2 semesters

*notes $p < 0.05$

Cohen's d : 0.20-0.49 (small effect); 0.50-0.79 (medium effect); 0.80+ (large effect)

All Students Post-Year 2 (Post-Retrospective Pre)

	TW	RR	PO	Total	
Cohort 2017	0.12	1.14* small	0.41*	1.68	(n=478) 4 semesters
Cohort 2018	1.42* medium	2.08* large	1.12* medium		(n=552) 4 semesters

*notes $p < 0.05$

Cohen's d : 0.20-0.49 (small effect); 0.50-0.79 (medium effect); 0.80+ (large effect)

- Interprofessional Socialization (IPS) Framework

IPS supports the development of an interprofessional identity.³ There are three stages supporting the development of an interprofessional identity: 1) breaking down the barriers/stereotypes, 2) learning of other roles and practicing interprofessional collaboration, and 3) development of a dual identity (professional and interprofessional).³ The Interprofessional Socialization Valuing Scale (ISVS) is a self-report tool that measures beliefs, attitudes and behaviors needed for interprofessional collaborative practice.⁴ The ISVS can be used overtime to monitor an individual's development of a dual identity.⁴

9A Questions (Pre Year 1 and 2)	Factor
I have gained an enhanced perception of myself as someone who engages in interprofessional practice.	Value (Score: 0-28)
I believe that the best decisions are made when members openly share their views and ideas.	
I have gained an enhanced awareness of roles of other professionals on a team.	
I have gained an appreciation for the importance of having the client and family as members of a team.	
I am able to share and exchange ideas in a team discussion.	Comfort (Score: 0-21)
I feel comfortable in speaking out within the team when others are not keeping the best interests of the client in mind.	
I feel comfortable in describing my professional role to another team member.	
I am comfortable engaging in shared decision making with clients.	Ability (Score: 0-14)
I feel comfortable in accepting responsibility delegated to me within a team.	

0-7 Likert Scale (0=N/A, 1=Not at all, 7=To a very great extent)

9B Questions (Post Year 1 and 2)	Factor
I have gained an enhanced awareness of my own role on a team.	Value (Score: 0-28)
I see myself as preferring to work on an interprofessional team.	
I have a better appreciation for the value in sharing research evidence across different health professional disciplines in a team.	
I believe that it is important to work as a team.	
I feel comfortable being the leader in a team situation.	Comfort (Score: 0-21)
I am able to negotiate more openly with others within a team.	
I have gained a better understanding of the client's involvement in decision making around their care.	
I feel comfortable in being accountable for the responsibilities I have taken on.	Ability (Score: 0-14)
I feel comfortable in clarifying misconceptions with other members of the team about the role of someone in my profession.	

0-7 Likert Scale (0=N/A, 1=Not at all, 7=To a very great extent)

All Students Pre-Year 1 (form 9A)

	Value	Comfort	Ability	Total	
Cohort 2020	19.64	14.74	10.97	45.34	n=741

All Students Post-Year 1 (form 9B)

	Value	Comfort	Ability	Total	
Cohort 2019	20.65	14.88	11.28		n=678
Cohort 2020					

All Students Pre-Year 2 (form 9A)

	Value	Comfort	Ability	Total	
Cohort 2019					
Cohort 2020					

All Students Post-Year 2 (form 9B)

	Value (0-28)	Comfort	Ability	Total	
Cohort 2018	20.99	15.05	11.05		n=576
Cohort 2019					

All Students Change in Year 1 (form 9B-9A)

	Value (0-28)	Comfort	Ability	Total	
Cohort					
Cohort					

All Students Change in Year 2 (form 9B-9A)

	Value	Comfort	Ability	Total	
Cohort					
Cohort					

Meta-Model of Interprofessional Development

- The Meta-Model of Interprofessional Development includes 8 phases that outline a sequence of actions and integrates interprofessional practice, education and research taking place at different levels of abstraction is constructed to connect practice, education and research with regard to interprofessional collaboration.⁵ The Meta-Model of Interprofessional Development is a theory- and evidence-based roadmap of priorities to integrate different professional services in order to enable an optimal joint outcome.⁶

Phase	Description
0	Learning more about my own profession
1	Getting to know other professional students
2	Learning about other professions' training and roles
3	Identifying value in different perspectives and/or interventions
4	Identifying environmental factors that positively or negatively influence collaboration
5	Developing a sense of belonging to a larger community of different professions
6	Reflecting and evaluating interprofessional experiences with the intention of improving future collaborations
7	Building alliances with key stakeholders to enable interprofessional collaboration

All Students

	Prior to Team Up	End of Team Up Year 1	Beginning of Team Up Year 2	End of Team Up Year 2	
Cohort 2019	1.20	3.42	4.19		n=725

Reflections:

- Year 1

Individual: Role on an immunization team (IPS Framework, Stage 3)

Individual: Promoting a positive collaborating learning environment as a team member

Individual: Interprofessional Cultural Competence (IPS Framework, Stage 1)

Individual: Interprofessional Growth

Team: Team Growth (7 Cs of Team Science)

Team: Application of IPEC sub-competencies (VE1, VE3; CC2, CC8; RR4, RR10; TT1, TT8)

- Year 2

Individual: Interprofessional discussions on health inequities (Meta Model, Phase 3 and 5)

Individual: New knowledge and usefulness in future practice (Meta Model, Phase 6)

Individual: Environmental factors supporting collaboration; Personal responsibility for collaboration (Meta Model, Phase 4 and Phase 6)

Individual: Sharing accountability IPEC sub-competency TT7 (Meta Model, Phase 5)

Individual: Interprofessional Growth

Team: Team Growth (7 Cs of Team Science)

Team: Application of IPEC sub-competencies (CC8); Benefits, challenges and solutions to interprofessional approach

References

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