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Students' perceptions of the relevance of instructors' assessment items in online community-based interprofessional education

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ABSTRACT

Introduction: This study aimed to acquire students' perceptions of the assessment items used by instructors implemented in the community-based Interprofessional Education (IPE) program during the COVID-19 pandemic. The study also compared the students' perceptions of the instructors' assessment items regarding student characteristics. Motivation for joining the IPE program and a comparison between motivation and gender and disciplines were also identified in this study.

Methods: The research method is observational with a cross-sectional approach. Sixth-semester medical, nursing, and nutrition students who had completed the community-based IPE program were involved. Students' perception was measured using a questionnaire on the instructors' assessment items developed based on the IPE competencies. Motivation was measured using a Motivated Strategies for Learning Questionnaire (MSLQ).

Results: A majority of students across the three programs agreed or strongly agreed with the assessment items, and there were no significant differences in student perceptions from the variables of gender ($p = 0.23$) and disciplines ($p = 0.68$). The correlation between students' motivation and their perception of the instructors' assessment items was significant ($r_s = 0.61$ with $p < 0.01$). However, there was a weak and not significant correlation between students' grade point average (GPA) with the perception of assessment items ($r_s = 0.1$ with $p = 0.07$).

Conclusions: All instructors' assessment items were still perceived as relevant and can be used to assess the students during IPE online learning. Thus, the result of this study can be considered to be used in another setting with a similar situation.

Keywords: assessment, community-based, interprofessional education (ipe), online learning, perception

Introduction

An interprofessional education (IPE) program is a learning activity in which two or more health students learn with, from, and about each other as professionals to collaborate and improve health services (World Health Organization, 2010). It can be implemented in several learning methods, namely: seminars, problem-based learning (PBL), skills laboratories, clinical practice, and community-based education (CBE). However, since IPE learning with formations in the classroom primarily develops some of the skills needed to provide health services, CBE is suggested as a model for collaborative IPE learning (Lestari, Scherpbier and Stalmeijer, 2020). Lewis and Clark Community College's School of Nursing has been implementing IPE on the CBE since 2006, and

the program continues to grow in scope and has received good feedback (Cuff, 2015).

In the Indonesian context, IPE has been implemented in various settings in the hospital and the community. Randita, Widyandana and Claramita, (2019) reported that community-based IPE is effective in improving collaborative competencies among medical and midwifery students. Moreover, a community-based IPE program encourages collaboration among medical, nursing, and midwifery students, especially when the students help families and communities solve their identified health problems (Lestari, Scherpbier and Stalmeijer, 2020).

Along with IPE development, there is an expectation to show student learning outcomes and competencies through assessment. Assessment is assigning or determining value based on certain specific criteria. The objectives include assessing educational goals' achievement and finding out what students have obtained in learning activities (Anderson and Kinnair, 2016). The success in revealing the learning outcomes and processes is highly dependent on the quality of the assessment method and its implementation (Asmara *et al.*, 2021). The benchmark for successful learning in the IPE program is the achievement of the expected competencies. An Interprofessional Education Collaborative Expert Panel identified four core competencies expected from IPE: interprofessional ethical values, responsibility, communication, and teamwork (Schmitt *et al.*, 2011).

The Faculty of Medicine, Universitas Diponegoro, has implemented an IPE program in the community setting since 2016. A small group of students consisting of 4-5 students from three disciplines (medicine, nursing, and nutrition) is attached to a family in three stages. The students visit the family to measure and identify the health problems of all family members. They discuss the issues identified and plan the intervention with the team members and the instructor (stage 1). Students who have implemented an integrated health intervention, monitored (stage 2), evaluate their intervention outcome (stage 3), and present it in the seminar of nine small groups with three instructors. At the end of the program, the students visit the family to give feedback and express their gratitude. The IPE program in this institution conducts four student assessment methods, i.e., self and peer assessment, instructors' assessment, and assessment from the family. All items of the IPE assessment were developed based on learning objectives. Before joining the program, the students are given an explanation about the program, including the assessment process (Asmara *et al.*, 2019).

The increasing number of COVID-19 cases is affecting all systems, including education. Fortunately, responding to the guidelines for social distancing, learning from home is still an option for delivering the learning process, including the IPE program, which must change from face-to-face to online learning methods (Khalili, 2020). It has consequences in all aspects of education, including implementation of IPE in a community setting. Therefore, during the COVID-19 pandemic, this implementation was conducted online and virtually, such as visiting the family, discussing with a team, supervision, and assessment from the instructors. Several online platforms were used depending on the students' and family's resources.

The research team understands that this situation will undoubtedly affect the learning and assessment program. Therefore, it is necessary to evaluate whether the assessment method is still relevant during the pandemic. Involving the students in designing the curriculum, including assessment, will increase the applicability and usefulness of the curriculum (McKenney and Reeves, 2021). It is necessary to evaluate whether the online community-based IPE program, including the assessment, can be implemented smoothly and valued by the students. Students' perceptions of learning can be influenced by intrinsic and extrinsic factors, including gender, disciplines, grade point average (GPA), and motivation (Yune *et al.*, 2020). Furthermore, assessment drives learning, meaning that the assessment must be designed for a meaningful learning process for students, including methods and instruments used (Dolmans and Tigelaar, 2012). Therefore, the authors identify students' perceptions on the instructors' assessment items and compare these perceptions in terms of student characteristics factors (gender and disciplines), then analyze the correlation between motivation and GPA with perceptions.

Materials and Methods

Design and Settings

The authors conducted a cross-sectional observational study to gather and compare students' perceptions across various independent variables. The reason for using this method was to collect students' perceptions of assessment items from the instructors, including several independent variables that would be done using a one-time data collection. Thus, a cross-sectional approach is appropriate for the study design. The authors collected the data on students' gender,

disciplines of the study program, students' motivation, GPA, and perceptions of assessment items using a Google Forms questionnaire. Furthermore, the authors compared students' perceptions of assessment items based on GPA and the disciplines of the study program.

Samples

The sample collection was obtained from participants who met inclusion criteria, namely students in the 6th semester (3rd year) of the medical, nursing, and nutrition program; completed the IPE program; and agreed to be involved in the study. The target population was 470 health professional students consisting of 234 medical students, 130 nursing students, and 106 nutrition students. Using the formula of minimal sample size for a questionnaire study, with a 5% margin error, 95% confidence interval, and population variance (P=50%), we should have a minimum of 285 respondents (Taherdoost, 2017). Therefore, to anticipate a low response rate, the authors sent the questionnaire to all students who met the inclusion criteria.

Research Instruments

The questionnaires included students' motivation for the IPE program and instructor assessment. A Likert scale from 1 to 4, ranging from Strongly Agree to Strongly Disagree, was used to answer both questionnaires The students' motivation was measured by using the Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintricht. It was reported that 77 statements in the MSLQ in Indonesian version were valid and reliable. Internal consistency of motivation and learning strategies was 0.89 and 0.88, respectively (Ningrum, 2021). The questions included the motivation of the students in joining IPE program including the benefits that will be gained.

The IPE team developed the instructors' assessment items based on the IPE competencies, followed by an expert panel to do content validity and apply the validity and reliability test. Fifteen statements resulted from content validity. Exploratory factor analysis (EFA) was employed to determine the validity, which resulted in a range of loading factors 0.633-0.817 (> 0.3). Furthermore, the statements were reliable, with Cronbach's alpha of 0.925 (Asmara *et al.*, 2021). The assessment items covered individual and group assessment items. Questions 1-10 were for a group assessment, while questions 11-15 were for the individual student's evaluation. The authors obtained data from students' GPAs up to semester six from the faculty administration.

Data Collection

To collect the data, the first author distributed questionnaires to all 470 students who had just finished their community-based IPE program. The Google Forms application was used to avoid luring meetings. Before filling out the questionnaire, all participants were given an explanation of the data collection process using Zoom methods.

Ethical Consideration

This research has obtained approval and ethical feasibility in the form of ethical clearance from the Health Research Ethics Commission Faculty of Medicine Diponegoro University No: 204/EC/KEPK/FK-UNDIP/VI/2021. The explanation of confidentiality of their identity and a guarantee that their perceptions would not affect their scores were written in the preface of the Google Forms questionnaire. Obtaining the students' signed informed consent was a prerequisite for participating in the questionnaire.

Data analysis

The Kolmogorov-Smirnov test identified that the data were not normally distributed. Therefore, we used the Mann-Whitney test to compare student perceptions by gender, the Kruskal Wallis test to compare student perceptions from three study programs, and the Spearman-rho correlation test to determine the relationship between GPA and motivation with their perception toward item assessment.

Results

Students' characteristics

Three hundred and thirty-seven (337) students completed the questionnaires (Response rate 71.7%). The student's gender, the study program, and the respondents' GPA distribution are detailed in Table 1. More than half of the respondents were medical students, and a majority were female students—furthermore, only four students had a GPA of less than 3.00.

Student perception on assessment items

Table 2. Students' perception on assessment items (n = 337)

No	Item of assessment	Strongly Agree	Agree	Disagree	Strongly disagree	Mean ± SD	Median
1	Ability to identify family health problems and determine possible causes	132	198	6	1	3.37 ± 0.5	3
2	Ability to formulate rationalization or justification of intervention	118	212	6	1	3.33 ± 0.5	3
3	Presentation (appearance, timing, clarity)	112	213	12	0	3.30 ± 0.5	3
4	Discussion (fluency, presentation material mastery)	125	200	10	2	3.33 ± 0.5	3
5	Communication skills	154	174	7	2	3.42 ± 0.6	3
6	Professionalism (mutual respect, not dominant, giving opportunities to other members)	178	154	4	1	3.51 ± 0.5	4
7	Comprehensive and collaborative interventions (media, delivery methods, creativity)	149	174	12	2	3.39 ± 0.6	3
8	Results of intervention monitoring & evaluation	128	199	9	1	3.35 ± 0.5	3
9	Follow-up plan (for family)	113	210	14	0	3.29 ± 0.5	3
10	Final report quality	104	223	9	1	3.28 ± 0.5	3
11	Discipline	140	193	4	0	3.40 ± 0.5	3
12	Responsibility	162	172	3	0	3.47 ± 0.5	3
13	Communication skills	141	186	9	1	3.39 ± 0.6	3
14	Cooperation ability	154	179	4	0	3.45 ± 0.5	3
15	Politeness & respect for others	170	160	6	1	3.48 ± 0.5	4

Table 2 shows that most respondents agreed and strongly agreed with all assessment items. The item Professionalism (mutual respect, not dominant, giving opportunities to other members) received the highest score, averaging 3.51 ± 0.5 on a scale of 1 (Strongly Disagree) to 4 (Strongly Agree). Politeness and respect for others also received a high score, averaging 3.48 + 0.5 with a median of 4. Meanwhile, item "final report quality" had the lowest score, averaging 3.28 ± 0.5 on the same scale. Thus, even though most students perceived that assessment items were good, the "final report quality" item should receive proper attention.

Students' motivation

Overall, most students have a good motivation to participate in the community-based IPE program. Table 3 presents items related to student motivation. Most students selected 'Strongly Agree' or 'Agree,' some indicated 'Disagree,' and a few chose 'Strongly Disagree.' The item with the highest score was "I feel IPE learning is helpful for me," with an average value of 3.31± 0.5, while the lowest score was "I like IPE learning," with an average value of 2.91± 0.7. The result shows that even though the number of students who like IPE learning was small, they thought that IPE is a helpful learning for them.

Comparison of students' perceptions on item assessment

Table 4 shows no significant difference in student perceptions toward the sum perception of instructors' assessment items based on gender and disciplines with p-value 0.23 and 0.68, respectively. However, this study showed that male students perceived more positively than female students and nursing students' perceptions were lower than those of other students in different disciplines.

Table 3. Item of student motivation in participating in the IPE program (n = 337)

No	Statement Item	Students' Motivation				Mean ± SD	Median
		Strongly Agree	Agree	Disagree	Strongly Disagree		
1	I can learn and do everything well in this IPE program.	103	228	5	1	3.28 ± 0.5	3
2	I can understand the material presented in IPE learning.	92	229	15	1	3.22 ± 0.5	3
3	I can solve problems well while studying IPE.	93	231	13	0	3.24 ± 0.5	3
4	I prefer challenging assignments so that I can learn new things.	65	206	63	3	2.99 ± 0.6	3
5	I like IPE learning	57	199	75	6	2.91 ± 0.7	3
6	I feel I can relate IPE material to other courses.	116	205	14	2	3.29 ± 0.6	3
7	I often look for readings that provide additional knowledge, even though it takes extra time.	66	223	48	0	3.05 ± 0.6	3
8	I feel IPE learning is helpful for me.	121	202	13	1	3.31 ± 0.5	3
9	I find the IPE learning process enjoyable.	68	189	74	6	2.95 ± 0.7	3

Table 4. Comparison of the sum perception on the assessment items based on gender and disciplines (n = 337)

Variables	The sum perception on the assessment items (Median ± Interquartile Range)	*Min*	*Max*	*p value*
Gender				
Male	52 ± 15	30	60	0.23*
Female	49 ± 11	39	60	
Disciplines				
Medical	50 ± 13	30	60	0.68**
Nursing	47.5 ± 13	35	60	
Nutrition	50 ± 12	38	60	

**Mann-Whitney test (p-value <0.05)*
***Kruskall Wallis test (p-value <0.05)*

The correlation between students' motivation and GPA with the perception of the assessment items

The Spearman-rho correlation test indicated a strong and significant correlation between students' motivation and their perception of the instructors' assessment items ($r_s = 0.61$ with $p < 0.01$). However, there was a weak and not significant correlation between students' GPA with the perception of assessment items ($r_s = 0.1$ with $p = 0.07$). The Spearman-rho correlation test indicated a strong and significant correlation between students' motivation and their perception of the instructors' assessment items ($r_s = 0.61$ with $p < 0.01$). However, there was a weak and not significant correlation between students' GPA with the perception of assessment items ($r_s = 0.1$ with $p = 0.07$).

Discussions

The study shows that students positively perceive the assessment items during online learning in a community-based IPE program. However, there are no differences in perception among students based on gender and discipline. Meanwhile, there is a strong and significant correlation between students' motivation and their perception, and there is a weak and not significant correlation between students' GPA and the perception of assessment items.

Student perception on assessment items

Student assessment in community settings has several problems due to varying field conditions. However, this study revealed that students have a positive perception of the assessment items, and the highest average value of the assessment item was "Professionalism." Professionalism, as defined by the Interprofessional Education Collaborative Expert Panel, is the specific competencies of the IPE program (Schmitt *et al.*, 2011). Students must develop their professional attitude during the educational process, even from the beginning of education. Students' attitudes during the educational process can inform their behavior during later practice (Arif *et al.*, 2014). Thus, the result of this item suggests that the students understand the relevance of assessment professionalism as an essential aspect of their future collaboration practice.

The assessment item with the lowest average is "quality of the final report." The final report is one of the assessment criteria used by supervisors to determine students' abilities. Before reaching the final report, a team of students composed a report of each stage that needed instructors' feedback to improve the report's quality. However, implementing IPE in a community setting lacks supervision and feedback because the instructors are not on the students' side (Kristina *et al.*, 2023). It is worsened by online learning where feedback is also served online (Khalili, 2020). Therefore, the supervisor's feedback on the final report might need to be improved, affecting the report's quality.

Students' motivation

Students participating in a community-based IPE program are well-motivated. Most students agree and strongly agree on statements of motivation. High motivation results in high engagement in an IPE team to reach the goals (Oyserman and Destin, 2010; Khalili *et al*., 2013; Reinders and Krijnen, 2023). Therefore, having good motivation is a good step for students to participate in the program.

Comparison of students' perceptions on item assessment

This study showed no significant differences in perceptions between male and female students, in

Table 5. Correlation between students' motivation and GPA with the sum perception on the assessment items (n = 337)

Variables	The sum perception on the assessment items (Median ± Interquartile Range)	*Min-Max*	*r_s*	*p value*
Students' motivation	3.22 ± 0.53	2 - 4	0.61	< 0.01***
GPA	3.53 ± 0.22	2.81 – 4.00	0.1	0.07***

**** Spearman-rho test (p-value <0.05)*

which males were slightly more positive than female students. Meanwhile, gender, age, and experience in IPE affect students' perception of the IPE program including the assessment process (Hammick *et al.*, 2007; Cant, Leech and Hood, 2015;). A possible explanation could be that the male students involved in this study were limited to only 20% of the participants. In contrast, the number of participants influences the result of the study (Taherdoost, 2017).

The results also showed no significant difference in students' perceptions of the instructors' assessment items regarding disciplines. However, nursing students' perceptions were lower than those of other students in different disciplines. Most previous research reported significantly different student perceptions toward IPE from various study programs. Nursing students are mostly the highest, whereas medical students are the lowest (Lestari *et al*., 2018; Yune *et al*., 2020) Medical students' perceptions are lower than other students in different disciplines because medical students were more skeptical about IPE than other health students. They think IPE is less critical and a waste of time because their curriculum is already tight. The academic burden is excessive, so they are less interested and enthusiastic about the IPE program (Yune *et al*., 2020). Furthermore, different perceptions of patients' needs and unequal participation in decision-making are other reasons why the perceptions of IPE programs among students differ (Thistlethwaite, 2012; Sunguya *et al.*, 2014; Lestari *et al*., 2018). This study showed different results because the students might receive information from their seniors about how the program is. They were also involved in the preparation program in which the program was introduced, and they were trained to do case studies in a team (Asmara *et al*., 2019). Experiences with IPE are one of the factors affecting students' perceptions of the program (Hammick *et al*., 2007; Cant, Leech and Hood, 2015).

The correlation between students' motivation and GPA with the perception of the assessment items

This study indicated a strong and significant positive relationship between motivation and student perceptions of instructors' assessment items, which is in line with previous research that reported high motivation and level of engagement resulted in good student perceptions of the IPE program where the assessment process is included (Soemantri *et al*., 2020). Thus, the excellent result of the student's perceptions of the assessment items could be caused by a high motivation to participate in this program. In addition, assessment drives learning, which means that the objectivity of the assessments process and instruments increases students' learning stimulation (Wiliam, 2011). The results showed that almost all students had satisfied GPAs even though there was a weak and not significant correlation between students' GPAs with the perception of instructors' assessment items. It's similar to other study, which also reported that academic achievement was significantly related to higher scores for teaching perception, atmosphere, and social self-perception (Ahmed *et al.*, 2018; Sarmita, 2018).

A limitation of this study is that the differences in the supervision styles, learning experiences, and learning environment, which might influence the differences in students' motivation and perception of the assessment items, need to be investigated. Another limitation is that we should have compared the students' perception of the assessment items with the previous IPE program to see the reliability or consistency of the results. Further research should identify other factors, such as supervision styles, learning experiences, and learning environment, that affect students' perception of assessment in the IPE program.

Conclusion

In conclusion, students have perfect perceptions of items of instructors' assessment during IPE online learning during the COVID-19 pandemic. The study showed no significant difference in students' perceptions of gender and disciplines. Moreover, a significant and strong relationship existed between motivation and student perceptions of assessment items. However, a weak and insignificant correlation existed between students' GPAs and their perceptions of the assessment items.

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Conflict of Interest

The authors do not have any conflict of interest to be declared. All authors give permission to publish the manuscript.

References

Ahmed, Y. *et al.* (2018) 'Students' perception of the learning environment and its relation to their study year and performance in Sudan', *International journal of medical education*, 9, pp. 145–150. doi: 10.5116/ijme.5af0.1fee.

Anderson, E. S. and Kinnair, D. (2016) 'Integrating the assessment of interprofessional education into the health care curriculum', *Journal of Taibah University Medical Sciences*, 11(6), pp. 552–558. doi: 10.1016/j.jtumed.2016.10.005.

Arif, S. A. *et al.* (2014) 'Impact of an interprofessional international experience abroad on the attitudes of health care professional students', *Currents in Pharmacy Teaching and Learning*, 6(5), pp. 639–645. doi: 10.1016/j.cptl.2014.05.010.

Asmara, F. Y. *et al.* (2019) 'Implementation of interprofessional education in community setting', *Journal of Community Empowerment for Health*, 2(2), pp. 222–228. doi: 10.22146/jcoemph.47513.

Asmara, F. Y. *et al.* (2021) 'Assessment of Interprofessional Education (IPE) in Community Settings: A Systematic Review', *Nurse Media Journal of Nursing*, 11(3), pp. 318–335. doi: 10.14710/nmjn.v11i3.34155.

Cant, R., Leech, M. and Hood, K. (2015) 'Factors affecting Australian medical students' attitudes to interprofessional education; validity of the Readiness for Inter-professional Learning Scale-Med', *Journal of Interprofessional Education and Practice*, 1(3–4), pp. 90–96. doi: 10.1016/j.xjep.2015.10.002.

Cuff, P. A. (Ed.). (2015). Building health workforce capacity through community-based health professional education: workshop summary. National Academies Press.

Dolmans, D. H. J. M. and Tigelaar, D. (2012) 'Building bridges between theory and practice in medical education using a design-based research approach: AMEE Guide No. 60', *Medical Teacher*, 34(1), pp. 1–10. doi: 10.3109/0142159X.2011.595437.

Hammick, M. *et al.* (2007) 'A best evidence systematic review of interprofessional education: BEME Guide no. 9', *Medical Teacher*, 29(8), pp. 735–751. doi: 10.1080/01421590701682576.

Khalili, H. *et al.* (2013) 'An interprofessional socialization framework for developing an interprofessional identity among health professions students', *Journal of Interprofessional Care*, 27(6), pp. 448–453. doi: 10.3109/13561820.2013.804042.

Khalili, H. (2020) 'Online interprofessional education during and post the COVID-19 pandemic: a commentary', *Journal of Interprofessional Care*, 34(5), pp. 687–690. doi: 10.1080/13561820.2020.1792424.

Kristina, T. N. *et al.* (2023) 'Increasing the value of Community-Based Education through Interprofessional Education', *The Asia Pacific Scholar*, 8(2), pp. 4–13. doi: 10.29060/taps.2023-8-2/oa2755.

Lestari, E. *et al.* (2018) 'Understanding attitude of health care professional teachers toward interprofessional health care collaboration and education in a Southeast Asian country', *Journal of Multidisciplinary Healthcare*, 11, pp. 557–571. doi: 10.2147/JMDH.S178566.

Lestari, E., Scherpbier, A. and Stalmeijer, R. (2020) 'Stimulating students' interprofessional teamwork skills through community-based education: A mixed methods evaluation', *Journal of Multidisciplinary Healthcare*, 13, pp. 1143–1155. doi: 10.2147/JMDH.S267732.

McKenney, S. and Reeves, T. C. (2021) 'Educational design research: Portraying, conducting, and enhancing productive scholarship', *Medical Education*, 55(1), pp. 82–92. doi: 10.1111/medu.14280.

Ningrum, R. K. (2021) 'Validitas dan Reliabilitas Motivated Strategies for Learning Questionaire (MSLQ) pada Mahasiswa Kedokteran', *PENDIPA Journal of Science Education*, 5(3), pp. 421–425. doi: 10.33369/pendipa.5.3.421-425.

Oyserman, D. and Destin, M. (2010) 'Identity-Based Motivation: Implications for Intervention', *The Counseling Psychologist*, 38(7), pp. 1001–1043. doi: 10.1177/0011000010374775.

Randita, A. B. T., Widyandana, W. and Claramita, M. (2019) 'IPE-COM: A pilot study on interprofessional learning design for medical and midwifery students', *Journal of Multidisciplinary Healthcare*, 12, pp. 767–775. doi: 10.2147/JMDH.S202522.

Reinders, J. J. and Krijnen, W. (2023) 'Interprofessional identity and motivation towards interprofessional collaboration', *Medical Education*, (October 2022), pp. 1–11. doi: 10.1111/medu.15096.

Sarmita, R. N. (2018) 'Contributing Factors To the Low Grade Point Average (Gpa) of Undergraduate Students', 2(03), pp. 1–27.

Schmitt, M. *et al.* (2011) 'Core competencies for interprofessional collaborative practice: Reforming health care by transforming health professionals' education', *Academic Medicine*, 86(11), p. 1351. doi: 10.1097/ACM.0b013e3182308e39.

Soemantri, D. *et al.* (2020) 'Measuring the interprofessional collaborative competencies of health-care students using a validated Indonesian version of the CICS29', *Journal of Interprofessional Care*, 34(6), pp. 763–771. doi: 10.1080/13561820.2019.1697215.

Sunguya, B. F. *et al.* (2014) 'Interprofessional education for whom? - Challenges and lessons learned from its implementation in developed countries and their application to developing countries: A systematic review', *PLoS ONE*, 9(5). doi: 10.1371/journal.pone.0096724.

Taherdoost, H. (2017) 'Determining sample size; How to calculate survey sample size', *International Journal of Economics and Management Systems*, 2(2), pp. 237–239.

Thistlethwaite, J. (2012) 'Interprofessional education: A review of context, learning and the research agenda', *Medical Education*, pp. 58–70. doi: 10.1111/j.1365-2923.2011.04143.x.

Wiliam, D. (2011) 'What is assessment for learning?', *Studies in Educational Evaluation*, 37(1), pp. 3–14. doi: 10.1016/j.stueduc.2011.03.001.

World Health Organization, W. (2013) 'Transforming and Scaling up health professionals' education and training', *WHO publication*, p. 124.

Yune, S. J. *et al.* (2020) 'Perception of interprofessional education and educational needs of students in South Korea: A comparative study', *PLoS ONE*, 15(12 December), pp. 1–13. doi: 10.1371/journal.pone.0243378.

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