

VALIDATION OF A TOOL TO MEASURE THE LEVEL OF SCHOOL-UNIVERSITY PARTNERSHIP

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Abstract: This study aims at developing and validating an audit tool that could be used to assess school-university partnerships. Specifically, the study followed four steps of (i) evaluating and modifying contents and items of the original tool, (ii) qualitatively assessing content validity of the revised scale basing on expert ratings, and revising the scale accordingly, (iii) conducting cognitive interviews with potential participants, and making further revision, and (iv) quantitatively evaluating the validity and reliability of the audit tool based on data collected from 463 participants, and finalizing the tool. In the end, an audit tool consisting of 36 questions that fit into two scales (i.e., “*Shared goals and values*” and “*Partnership operations and management*”) was confirmed. The study also discussed potential uses of the tool for *both currently working partnerships and newly formed partnerships; and at different levels.*

Keywords: school university partnership, level of partnership, validation

Introduction

Teacher education plays a critical role in enhancing the quality of future teachers. However, the quality of teacher education in the world in general and in Vietnam in particular has raised deep concerns among researchers. Most of the recent reviews of initial teacher education (ITE) programs listed the disconnection between the university and school as a significant issue challenging ITE. In order to improve the quality of teacher education, it has been suggested that *school-university partnerships (SUPs)* should be the key (Allen, 2013; Bernay et al., 2020; Burroughs et al., 2022; Maheady et al., 2019; Moss, 2008; Willis et al., 2018).

The benefits of school-university

partnerships for supporting pre-service teachers and involved parties are well documented, and factors that contribute to an effective partnership are also proposed in many studies (e.g., Behringer et al., 2018; Maheady et al., 2019; Wannu et al., 2010). However, institutions in the implementation and evaluation process may have a difficult time assessing where they are and what can be done to strengthen their connections with schools. A new partnership might also experience great challenges because an assessment instrument is not in place to guide its planning and implementation. Therefore, the creation of an evaluation tool that aids institutions in determining the degree of school-university partnerships is required. This is especially essential in the context of Vietnam where the need of

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establishing connections between pedagogical institutions and schools is currently being emphasized by the Ministry of Education and Training of Vietnam. A number of recent policy documents requiring close partnership between and among institutions have been put in place. For instance, Dispatch no. 1201 (MOET, 2020a) stresses the importance of partnership between pedagogical universities, educational management institutes and schools to organize professional development activities for in-service teachers in the Enhancing Teacher Education Program (ETEP). Dispatch no. 3089 (MOET, 2020b), on the other hand, requires close collaboration between schools and higher education institutions, research institutes and businesses to organize STEM educational activities for students. While collaboration is desired by local authorities to improve educational experiences for teachers and students, the development of an evaluation instrument that enables the identification of areas for improvement in a school-university partnership becomes increasingly crucial.

We were unable to locate a national ‘tailor-made’ tool for evaluating partnership experiences in the context of Vietnam as well as identify a validated tool in the foreign educational contexts. Thus, the purpose of this study was to create a measurement tool that is both valid and reliable for performing ongoing evaluations of school-university partnerships in Vietnam and in other settings.

Literature Review

Conceptualizing School - University Partnership

The term ‘partnership’ commonly denotes notions of sustained relationship, equality, respect, reciprocity and ownership (Gutiérrez, 2008). It is often considered synonymous with words like *association*,

collaboration, *participation*, *joint decision making* and *long-term relationship* (Oxford English Dictionary - OED, 2011). Yet, there exists a lack of clarity surrounding the precise definition of the term, and the underlying principles of a partnership (Bailey & Dolan, 2011; Maheady et al., 2019).

In early literature on partnerships, attempts were made to distinguish between ‘partnership’ and related concepts, such as ‘collaboration’. Carnwell and Carson (2005), for example, believe that ‘partnership’ refers to “who we are”, whereas ‘collaboration’ is more about “what we do”. According to them, partnership is the highest level of working relationship between different people and organizations. In other words, when individuals get more involved, they would start collaborating with each other and through collaboration, a stronger sense of involvement would be secured. Once sufficient trust, respect and willingness could be gained on each individual party’s side, partnership would develop.

In the context of higher education cooperation, ‘partnership’ has been defined as: ...a dynamic collaborative process between educational institutions that brings mutual though not necessarily symmetrical benefits to the parties engaged in the partnership. (Wanni et al., 2010, p. 18)

When viewed in this light, partnership cannot be forced; rather, it must be developed within relationships where the collaborative partners are prepared to discuss issues of trust, equality, and mutual authority while also being willing to share differences, challenge the traditional forms of authority they typically attribute to their roles and relationships, and search for more inclusive solutions to their problems.

Conditions for Effective School-University Partnership

Despite the diverse ways in which a partnership could be defined, there are certain characteristics that are shared across different definitions. Much of the recent literature on successful partnerships points to a common set of conditions which comprise “the importance of shared leadership, shared goals, development of social and intellectual skills needed for collaborative work, and adequate time” (Arhar et al., 2013, p. 219). The following list pre-requisites for success is noted: the presence of an organizational structure, a core group of people actually working on the collaboration, a commitment of significant amounts of time and energy, flexibility, an understanding of how ‘the other organization’ works, determination to learn from inevitable conflicts and a desire to work together on something, and a shared sense of trust and pride in the outcomes of the collaboration. There are a number of features recurring across previous research, which will be elaborated below:

1. Shared Values and Vision

Smooth collaboration may be challenging due to the fundamentally different underlying cultural assumptions of schools and universities, which frequently refer to differences in organizational cultures. Research, academic independence, academic integrity, and high academic standards are traditionally valued by universities, whereas schools emphasize the practical issues (Wasonga & Wanzare, 2011). This necessitates a change in mindset from all involved to create shared values and vision. To enable a shared understanding of these values, the institutional missions must be made clear early in the process, and the engaged members must understand why they are there and what they value (Wasonga & Wanzare, 2011).

2. Shared Goals and Objectives

An effective partnership also relies on shared goals and objectives between two parties. Researchers (e.g., Arhar et al., 2013; Wasonga & Wanzare, 2011) have noted that the potential conflict in school-university collaboration lie in the conflicts in purposes and goals. This may be due to the lack of communication before the partnership; thus, a successful one requires partners to work together towards common goals and objectives. As goals and objectives are set out to achieve during the partnership, Wasonga and Wanzare (2011) warn that collaborators need to have realistic expectations.

3. Factors Affecting the Operational Processes

Operational Structures

From a process perspective, Wasonga and Wanzare (2011) argue that collaborative partners should create an organizational framework that directs the collaboration process. This outlines a procedure for making decisions, involving the appropriate people, getting the right approvals for action when necessary, and conducting required follow-up. Similarly, Ansari and Phillipps (2004) are of the view that partnerships require active participation of the stakeholders in the sharing of ideas, experiences, skills, as well as the presence of joint decision-making and action mechanisms.

Resources

Resources are needed to enable productive collaboration between universities and schools. Resources in this context include money, time, space, as well as expert advice and knowledge (as can be seen in Green et al., 2020). Everyone involved often has to commit a lot of time and share their own expertise and knowledge. Funding, on the other hand, whether offered by the

school, the institution, or a third party, can be provided to participants in the partnership so that they can take the opportunity to achieve their goals.

4. Ways to Minimize Barriers in School-University Partnership

Pitfalls of SUPs have been identified in the literature (see Green et al., 2020) and accordingly, a number of suggestions have been documented in previous studies on ways to overcome these problems. First, there is a need to build mutual respect, trust and a sense of being valued so that relationships can develop. “Sharing common understandings and values is important, as is acknowledging and respecting differences in perspectives” (McLaughlin & Black-Hawkins, 2004, p. 279). In this process, partners are required to be open and clear about their expectations of and their roles in the relationship (Wanni et al., 2010). In fact, it is possible to characterize collaboration as a process in which members of various institutions constantly negotiate the power dynamics necessary for goal-setting and implementation. Institutions need to take efforts in finding ways to cooperate (despite the possible differences in tasks, responsibilities and approaches). In a study on school-university partnerships, Wanni et al. (2010) also found that for partnerships to be mutually beneficial to all parties involved, it is particularly important that those in higher education learn to act in different ways, “to converse in new languages and to listen to different voices” (Day, 1991, p. 69). Additionally, conflicts frequently arise during the actual collaboration process, such as those related to personnel selection, so they must be resolved within the collaboration itself (Wasonga & Wanzare, 2011). Thus, strong communication between and among partners is crucial in order to maximize transparency both within and outside of the partnership (Brandstetter et al., 2006).

Assessing School - University Partnership

Together with the growth of partnerships, there is also increasing need for tools that may allow stakeholders to review, evaluate the effectiveness of partnership activities, as well as plan for future ones. However, to date, more attempt have been paid to (i) mapping current partnerships against some checklists of qualities of successful partnerships (as having been reviewed in the previous section; Adams et al., 2004; Magee, 2003) or (ii) measuring the impacts of partnership activities on different stakeholders (e.g., Ng & Chan, 2012). The checklists may vary according to different disciplines and contexts. However, most existing assessments of school-university partnership, including assessment of its impacts on different stakeholders tend to be restricted to analysis of a limited number of successful cases (Behringer et al., 2018; Smith et al., 2021). More systematic assessments of SUPs at a larger scale appear to be extremely rare. Development of a tool that would allow for more systematic evaluation of school-university partnership in teacher education is thus of pressing need. The conceptualization of partnership in this study and the review of conditions for effective partnerships between schools and universities in the previous section lay the foundation for the development and validation of an assessment tool for measuring school-university partnership level.

Methods

In order to develop the school-university partnership level (SUP_level) questionnaire, we followed the two phases of (i) instrument design/ modification and (ii) instrument validation, as suggested by Stein et al. (2007) and Armstrong et al. (2005). Specifically, in the *design/ modification* phase, attempts were made to specify key contents and domains in the

survey. The survey after being modified was subject to a rigorous process of *validation* including (i) qualitative content validation (expert judgement); (ii) cognitive interviews and (iii) quantitative factor analysis. The four steps including both modification and evaluation work will be further clarified in the sections that follow.

Steps of the Development and Validation Process

In this section, the four specific steps in the designing phase will be further elaborated and the outcomes from each stage will be briefly reported.

Step One: Survey Content and Domain Specification

In developing the SUP_level questionnaire, priority was given to looking for measurements that are already in use. Our search for relevant scales to measure school-university partnership suggested a number of scales namely: Afsana’s (2009)

Partnership Assessment Toolkit, Henrick et al.’s (2017) *Framework for Assessing Research-Practice Partnerships*, Vestergaard et al.’s (2021) *Partnerships for development framework*. However, these scales and frameworks are either designed for use in another discipline (e.g., health, poverty management research) or target research-practice partnerships (i.e., Henrick et al., 2017) rather than teacher education. The *Quality Partnerships in Professional Experience (QPipeX) Audit Tool* (Walker et al., 2019) was one rare instrument that was specifically designed to evaluate school-university partnership in teacher education. The underlying constructs it measures also appeared to align with our conceptualization of a SUP. Walker et al.’s (2019) audit tool was thus selected to be the starting point for the current study. The tool consists of four main sections, each targeting one aspect of the partnership between schools and universities. Table 1 below provides a brief summary of the tool.

Table 1
Original Structure of the QPiPEX Audit Tool

Section 1: Aligned values and vision	9 items	5 point Likert scale (1= strongly disagree → 5= strongly agree)
Section 2: Shared goals and objectives	9 items	5 point Likert scale (1= strongly disagree → 5= strongly agree)
Section 3: Operational processes and procedures	9 items	5 point Likert scale (1= strongly disagree → 5= strongly agree)
Section 4: Minimizing barriers to professional experience partnerships	9 items	5 point Likert scale (1= strongly disagree → 5= strongly agree)
Total	36 items	

Although the scale matches with our conceptualisation of a SUP in our context, as of March 2022, we could not find any information about the validity and reliability of the scale yet. Therefore, attempts were made in this study to refine and validate the scale.

To refine the questionnaire, the research team worked together to evaluate

the items and domains in the original tool for usefulness, clarity, and redundancy. Redundant items were eliminated; ambiguous ones were reworded, double-barreled items (i.e., items that touched upon more than one issue) were rewritten to avoid any possible confusion. Below is an example of the questionnaire evaluation and revision process:

Table 2

Examples of Questionnaire Evaluation and Revision

Original item	Comments	Revised version
1.0 There is a well-defined and long-term vision for the Professional Experience partnership and both organizations are committed to ensuring its success.	- Double-barelled (2 main ideas in a statement.)	- There is a well-defined and long-term vision for the Professional Experience partnership. - We are committed to ensuring success of the partnership.
1.4 There is an appreciation of the diverse and dynamic nature of the respective partners organizations and that the management of change is constant.	- Double-barelled - “Management of change” belongs to process and procedure.	- We appreciate the diverse and dynamic nature of the respective partners.

The revised version was then translated into Vietnamese through a translation-back translation process before being sent to experts for content validity assessment in the next step.

Step Two: Qualitative Content Validation

One of the important qualities of a good survey is that it needs to measure what it is supposed to measure (Collins, 2003; Saw & Ng, 2001). In other words, *content validity* needs to be ensured. Of the multiple methods available for testing *content validity*, the Index of Content Validity (CVI) and the Content Validity Ratio (CVR) were selected for use in the current study because of their ease of computing, high comprehensibility, and their abilities to provide information about both item and scale (Armstrong et al., 2005; Polit et al., 2007).

The Index of Content Validity (CVI)

Item CVI (I-CVI) is usually calculated to evaluate the relevance of individual items in the scale. The score could be calculated by dividing the number of experts who rate an item as “very relevant” by the total number of experts (Zamanzadeh et al., 2015). The result of the calculation is a number between 0 and 1. It has been suggested that items with I-CVI > 0.79 are considered relevant, whereas those between 0.70 and 0.79 will need to be revised; and if

the value is below 0.70 the item should be eliminated (Zamanzadeh et al., 2015).

Scale CVI (S-CVI), on the other hand, reflects the content validity of the whole scale. S-CVI could be conceptualized as either *Universal Agreement among experts (S-CVI/UA)* or the *Average item quality (S-CVI/Ave)*; Zamanzadeh et al., 2015). S-CVI/UA could be computed by adding all items with I-CVI equal to 1 divided by the total number of items, while S-CVI/Ave could be attained by taking the sum of the I-CVIs divided by the total number of items (Zamanzadeh et al., 2015). If a scale has an S-CVI/UA ≥ 0.8 and an S-CVI/Ave ≥ 0.9, it can be considered having excellent content validity (Shi et al., 2012). In this study both S-CVI/UA and S-CVI/Ave were calculated.

The Content Validity Ratio (CVR)

The Content Validity Ratio (CVR) measures the essentiality of an item (Yamada et al., 2010). The formulation for the CVR is $CVR = (N_e - N/2) / (N/2)$, with N_e being the number of experts rating an item as “essential” and N being the total number of experts (Zamanzadeh et al., 2015). The CVR score may take any values between 1 and -1, with a high absolute score indicating higher level of agreement among experts (Zamanzadeh et al., 2015).

In order to evaluate the content

validity of the *SUP_level questionnaire*, first of all, a group of experts were identified. These were expected to be professionals who (i) were working in a teacher-education institution and (ii) had been involved in school-university cooperation activities. Invitation letters were sent to 10 potential experts and in the end the research received support from five, which according to Armstrong et al. (2015) is a fair number. As soon as agreement to be an expert rater was received, a package containing (i) a cover letter, (ii) the *SUP_level questionnaire*, and (iii) the content validity survey (together with instructions on how to rate each item) were sent to individual experts.

Step Three: Cognitive Interviews

Cognitive interviewing is a methodology that examines how respondents interpret and answer survey questions (Collins, 2003). The role of a cognitive interviewer, thus, would be encouraging participants to verbalize their thoughts as well as asking additional questions about the basis for respondents' answers (Beatty & Willis, 2007). Questions that were used most often in the interviews were: "Please tell me what you are thinking as you answer this question."; "What steps are going through your head as you pick an option for this question?"; "What do you think the question is asking you"; and "Please think aloud and tell me how you would answer this question" (Ryan et al., 2012). It is believed that this process would help researchers identify and correct potential problems with survey questions (Ryan et al., 2012).

In this study, cognitive interviews were conducted with two university lecturers and two school teachers. The interviews lasted between 45 minutes to 1 hour and were audio recorded. Moreover, the interviewers also took notes of interviewees' reactions during the interviews. Based on the interview recordings and notes, the

researchers would then classify the items into three categories: (i) items with no problem; (ii) items with minor misunderstanding; and (iii) unclear items. Items that experienced "minor misunderstanding" were then reworded, while "unclear" items were either removed, reworded or recombined with another question. Based on the findings from both expert review and cognitive interviews, the survey was once again revised by the research team. Changes were mostly related to the Vietnamese wording of the items.

Step Four: Quantitative Factor Analysis

The survey, after being revised, was transferred to Google Forms and sent to high school teachers, university lecturers, school leaders, as well as faculty members who have been involved in school-university partnerships in the Vietnamese contexts. Specifically, questionnaires were sent to faculty members of three teacher training universities in the North, Central, and South of Vietnam to collect responses from faculty members and university lecturers. The faculty members then forwarded the form to their partner schools. In the end, a total of 463 questionnaires were collected. The data after being exported to Microsoft Excel (from Google Forms), were imported into Stata (Version 14.1) for data screening, cleaning, and analysis.

Results

This section is designed so as to present and discuss results of each step described earlier.

Outcome From Step 1

The first version of the survey was developed. The questionnaire had the same four sections as the original questionnaire, but there were 49 items in total (15 items in Section 1; 14 items in Section 2; 10 items in Section 3; and 10 items in Section 4).

Outcomes From Step 2

I-CVI Results (Relevancy of Individual Items)

The I-CVI calculations for the relevancy of each item suggested that forty-three items (87.75%) were marked as relevant and the I-CVIs ranged from 0.40 to 1.00. Thirty five items had an ICVI = 1.00; eight had a score of 0.80; two had a score of 0.60; and four a score of 0.40.

S-CVI Results (Relevancy of the Overall Questionnaire)

The S-CVI/UA = 0.71 and the S-CVI/Ave = 0.90. Overall, the Universal Agreement method demonstrates moderate content validity while the Average approach

shows high content validity of the SUP_level.

CVR Results

The CVR was generated for each item. Items that were marked not essential had a CVR < 0.99 (this value is based on the total number of experts, N = 5). Nonessential items can be eliminated. Yet in this case, no item was identified as non-essential.

Outcomes From Step 3

Initial checking of scale reliability suggested very high values of Cronbach’s alpha for all four scales (Table 3), which according to Tavakol and Dennick (2011) may suggest redundancy in the scale.

Table 3

Assessment of Scale Reliability

Scale	Items	Cronbach’s alpha value
A - Aligned values and vision	A1 A3 A2 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15	0.981
B - Shared goals and objectives	B1 B2 B3 B4 B5 B6 B7 B8 B9 B10 B11 B12 B13 B14	0.984
C - Operational processes and procedures	C1 C2 C3 C4 C5 C6 C7 C8 C9 C10	0.979
D - Minimizing barriers to professional experience partnerships	D1 D2 D3 D D5 D6 D7 D8 D9 D10	0.982

The findings necessitated further factor analysis to refine the measurement models (Williams et al., 2010). Initial checking of (i) the determinant of the correlation matrix (Det = 0.000); (ii) Bartlett test of sphericity (p = 0.00); and (iii) Kaiser-Meyer-Olkin measure of sampling adequacy (KMO = 0.984) suggested that factor analysis could be conducted on the current set of data.

Exploratory Factor Analysis (EFA) using orthogonal Varimax rotation was thus employed to refine the measurement model.

Since the aim of EFA was to make sure that each item on the scale only measures a single behavior (Güvendir & Özkan, 2022), cross-loaded items (i.e., items that load on more than one factor) were removed from the scale. In this process, items were removed one by one starting from the most cross-loading one and continuing until no cross-loading items could be observed. The analysis was repeated 13 times with 13 items being removed from the scale, including: B13, A2, B1, B2, B5, B7, B11, A1, A3, B4, A4, A12, B10 (in order). In the end, a two-factor structure could be achieved (Table 4).

Table 4*The Two-Factor Structure*

Factor 1: Shared goals and values	A8, A9, A10, A6, A7, A5, A11, A15, A13, A14	Number of items in the scale: 10 Scale reliability coefficient: 0.978
Factor 2: Partnership operation and management	D5, D9, D6, D8, D7, D4, D3, D10, D2, D1, C9, C10, C2, C4, C1, C8, C3, B12, B6, C5, C7, C6, B8, B9, B14, B3	Number of items in the scale: 26 Scale reliability coefficient: 0.99

Outcome of Step 4

The final scale had 36 items as could be seen in Table 4 above. It is observable that while Items in section A remained the same, items in sections B, C and D had been subsumed together and reduced. Our observation of the items in these three sections suggests that they are all related to the management process. Therefore, the section was renamed as “Partnership operation and management”. The two scales had very good reliability scores (Cronbach’s alpha = .978 and .99 accordingly). Thus, in the final version (see Appendix), the questionnaire was refined to 36 items which fit into two scales, namely “Shared goals and values” and “Partnership operations and management”.

Discussion

The final version of the questionnaire suggested that school-university partnerships in Vietnam could be viewed (and assessed) in terms of “shared goals and values” and “partnership operations and management”. The finding is generally consistent with previous ideas on key elements of school-university partnership (Afsana, 2009; Green et al., 2020; Wasonga & Wanzare, 2011). The subsumption of the three factors (i.e., shared goals and objectives, operational process and procedures, minimizing the barriers to professional experience partnerships) into a single factor of “partnership operations and management” in the final version has actually helped focused attention to the

bigger issue of operation and management, or in other words to the activities in a partnership. It makes sense that similar to other activities like maintaining conversations, managing resources, *discussing goals and objectives* and *minimizing barriers* should be part of the partnership operations.

The questionnaire developed and validated in this study is a crucial part in assessing the degree of the university-school cooperation. It appears to be a useful tool for evaluating the many SUP dimensions, and as such, it can offer crucial information for measuring and creating successful partnership activities.

As discussed earlier in the choice of the audit tool (the questionnaire), this is among the first attempts to develop and validate a tool to systematically evaluate partnership between schools and universities. It thus serves as a methodological contribution to the field. A comprehensive series of subsequent phases were used to construct the measurement tool for the investigation. In order to improve the content of the survey, a review of the literature on the factors influencing a successful SUP, qualitative content validation, and the implementation of expert review and cognitive interviews, and quantitative factor analysis were used. The survey questions were subsequently amended, which led to the refining of the final content. A crucial step in making sure the survey created is reliable was validating the survey's items, which was carried out in step four in this study.

The approved tool could be useful for various partnership arrangements. It would be a helpful tool for both parties to utilize to undertake routine assessments of partnerships that are already established. Results from the questionnaire may also give the management and administration committees information about changes in the partnership over time if used often, such as at periodic assessments of a partnership.

The tool may (1) give newly formed partnerships a practical framework for partners to begin investigating the opinions or aspirations of various stakeholders by comprehending their shared values and objectives and (2) highlight to participants what to do and what to avoid in the operational processes and procedures. The tool would be of diagnostic use for partnerships that are having problems since it could assist partners in methodically identifying areas of dispute (and consensus) in values and goals at the implementation level and in developing action plans to strengthen the relationships. Additionally, it offers a common language that can make negotiations and communication between various school and university parties easier.

The tool's ability to be used to evaluate partnerships at different levels is another potential advantage. Data collected at middle management level (i.e., among head of department, teacher leaders, and program managers) as well as data from those who directly work together in the partnership (i.e., pre-service teachers, school teachers, and university lecturers/supervisors) may be compared to assessment data at the highest level (i.e., administrative board, university leaders, and school leaders). Potential incompatibilities might be found by comparing and contrasting the perspectives of various stakeholders as such, and corrective measures could be implemented where they were most necessary.

Conclusion

A tool to assess stakeholders' perceptions of the school-university partnership has been developed and validated in this study. The tool could be helpful in examining the partnerships' ongoing activity. It could also operate as a useful roadmap for future research into potential connections between independent variables (such as demographics) and low and high degrees of partnership. In our process of developing this tool, we conceptualize partnership as a universal term and consider the tool to be used in a variety of settings. Therefore, further research can also take into account the particularities of Vietnamese contexts in the development a measurement tool for assessing a SUP particularly for this setting.

Declaration of Conflicting Interests

The authors declare no conflict of interest.

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Appendix

FINAL QUESTIONNAIRE LEVEL OF PARTNERSHIPS BETWEEN TEACHER EDUCATION INSTITUTIONS AND PARTNERING SCHOOLS

This questionnaire aims at exploring your institution’s experiences of school-university partnership. For questions in this section, please decide the extent to which you Agree/ Disagree with the following statements (1= strongly DISAGREE → 5= strongly AGREE).

PART A. Aligned values and vision

	1= strongly disagree → 5= strongly agree				
<i>At our institution...</i>	1	2	3	4	5
1- We appreciate the diverse and dynamic nature of the respective partners.					
2- We understand that our duties/ tasks/ core business are partially interdependent.					
3- We value working together (with the partner schools) for a common good.					
4- We understand the drivers of the partnership(s).					
5- We understand the challenges that the partnership(s) provide(s).					
6- We understand the opportunities that the partnership(s) provide(s).					
7- We are willing to move beyond traditional roles and relationships to ensure the partnership is effective.					
8- There is regular review or evaluation of the partnership achievements.					
9- There is regular review or evaluation of the partnership directions.					
10- If changes are required, everyone is consulted prior to decisions being made.					

PART B. Partnership operation and management

	1= strongly disagree → 5= strongly agree				
<i>At our institution...</i>	1	2	3	4	5
11- Partners meet regularly to review the goal(s) of the partnership.					
12- There is a participatory decision-making system.					

13- We invest personnel in the partnership.					
14- We invest time in the partnership					
15- Staff in the respective partnership have opportunities to engage in professional development activities.					
16- Pre-service teachers play an important role in the decision-making process in the partnership.					
17-There are shared understandings of management structures between partners.					
18- There are established management and operational protocols between partners.					
19- There are opportunities for staff to work in each other’s organization.					
20- The partnership is supervised by a steering group/ committee with partner representation.					
21- There is formal agreement between partners.					
22- Leaders/managers in my institution support and promote the partnership.					
23- There are regular meetings between partners with agendas and minutes recorded.					
24- There are formal reporting mechanisms in place to share information about the activities within the partnership.					
25- Lines of communication are open, with designated key contacts within each organization identified.					
26- There is an established risk management plan in place if the partnership fails/suspended/dissolved.					
27- Potential barriers to the partnership(s) have been identified and possible solutions have been developed.					
28- There are plans in place to address differences in organizational priorities, goals and tasks.					
29- Experienced and committed staff (from the respective partner organizations) are in the leadership team.					
30- Both partners invested in the success of the partnership from the beginning.					
31- There are strategies in place to deal with the break-down of relationships within the partnership.					
32- Honest and robust conversations about the partnership are warranted.					
33- The value of the partnership is clearly articulated within partner organizations.					
34- There are well-established and transparent financial and resource management structures.					
35- There is no doubling up of procedures (processes or systems).					
36- There are processes in place to address complaints, relationship breakdown and blockers.					

XÁC TRỊ CÔNG CỤ ĐÁNH GIÁ MỨC ĐỘ QUAN HỆ ĐỐI TÁC GIỮA TRƯỜNG ĐẠI HỌC VÀ TRƯỜNG PHỔ THÔNG

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Tóm tắt: Nghiên cứu nhằm mục đích phát triển và xác trị một công cụ có thể được sử dụng để đánh giá quan hệ đối tác giữa trường đại học và trường phổ thông. Cụ thể, nghiên cứu thực hiện theo bốn bước: (i) đánh giá và sửa đổi các câu phần cũng như nội dung các câu hỏi của công cụ ban đầu, (ii) lấy ý kiến đánh giá của chuyên gia về sự phù hợp nội dung của thang đo và chỉnh sửa, (iii) thực hiện phỏng vấn nhận thức (cognitive interview) với một số đại diện trường đại học và phổ thông để đánh giá mức độ tường minh của các câu hỏi và tiếp tục điều chỉnh với những câu hỏi có vấn đề, và (iv) đánh giá tính hợp lệ và độ tin cậy của công cụ thông qua phân tích định lượng dựa trên dữ liệu được thu thập từ 463 người tham gia và hoàn thiện công cụ. Bản cuối cùng của công cụ bao gồm 36 câu hỏi được chia làm hai thang đo “Sự tương đồng của mục tiêu và giá trị” và “Các quy trình quản lý và hoạt động của quan hệ đối tác”. Nghiên cứu cũng thảo luận về khả năng sử dụng công cụ để đánh giá các quan hệ đối tác hiện có cũng như các quan hệ đối tác đang trong quá trình hình thành. Công cụ cũng cho phép đánh giá mỗi quan hệ đối tác ở các mức độ khác nhau.

Từ khóa: quan hệ đối tác giữa trường đại học với trường phổ thông, mức độ quan hệ đối tác, xác trị công cụ