Research projects and collaboration: Lessons for Learning Advisors?

Ehara taku toa I te toa takitahi. Engari to te toa takitini. Success is not the work. It is the work of many.

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Abstract

Since its inception in 2008, Ako Aotearoa (Ako), the National Centre for Tertiary Teaching Excellence, has funded numerous research and development projects, nationally and within the three Regional Hubs: Northern, Central and Southern. Many of the Association of Tertiary Learning Advisors of Aotearoa New Zealand (ATLAANZ) members have been involved at some level: as team leaders, members, participants and reviewers. Their experiences and insights have been the subject of a number of conference presentations and papers. There is a natural link between Ako Aotearoa and ATLAANZ as both are focused on improving outcomes for students and fostering excellence in tertiary teaching and learning. A further endorsement of this close alignment of purpose can be seen in Ako Aotearoa's sponsorship of the annual ATLAANZ conference over the last few years.

This research project is concerned with the underlying processes that contribute to the success of inter-institutional collaborative relationships within projects funded by Ako Aotearoa. This type of research is unprecedented in that firstly, it comprised of a national inquiry across all three regional hubs, and secondly, it was concerned with the strengths and sustainability of the collaborations themselves, rather than project outcomes and outputs. The survey of forty-four completed projects identified the key factors which participants believed had created 'good shelf-life', that is, where the relationship between team members had outlasted the project which brought them together in the first place. These findings have strong relevance for Learning Advisors, whose practice often calls for team initiatives and cross-disciplinary endeavours and whose access to students and inclusion in decision-making may rely on effective networking and professional connections.

Introduction

Various inter-institutional research collaborations have been described in the literature. For example, Katz and Martin (1997) define research collaboration as "the working together of researchers to achieve the common goal of producing new scientific knowledge" (p. 7). Alternatively, Wood and Gray (1991) see collaboration "as an interactive process between autonomous stakeholders who can see different aspects of a common problem" (p.146). Both definitions are likely to be acceptable with Learning Advisors in New Zealand, particularly if the increase in inter-institutional research collaborations continues. For

example, between 2005 and 2012, only 3.7% of ATLAANZ published papers were collaborative in nature, whereas in 2013, 36% of the conference papers fell into this category (ATLAANZ, 2014).

Research collaboration is an effective method of linking distributed knowledge and skills into new ideas and research results (Choi & Robertson, 2013). Working across multiple organisations is in contrast to 'within institutional' collaboration, which by its nature has until just recently not extended more widely than immediate colleagues. The need for greater inter-institutional collaborative enquiry and practice, particularly between Learning Advisors in multiple organisations, and the subsequent inter-institutional knowledge flow is an important facet of tertiary education. This is particularly the case in New Zealand's current economic climate, where government investment in the tertiary sector needs to stretch as far as possible, and we all need to avoid pointless commitment of time and energy 'reinventing the wheel'.

Ako Aotearoa (Ako)'s investment in research in the New Zealand tertiary sector takes three forms: research, resource development, and teaching and learning initiatives. Ako's funding requirements focus on demonstrable, tangible evidence that the research has impacted its target population and produced measurable improvements in achievement, or quality of provision in the sector. If these do not occur the research must have the potential to produce such results at a later time. In addition to 'quality', a central tenet of Ako's vision is collaboration. The work of Learning Advisors is naturally collaborative, both internally and externally, and therefore any learning about what assists collaborative partnerships to work effectively has the potential to inform their practice.

Forty-four out of a funded 122 completed projects funded through Ako's three Regional Hubs involve team members from two or more organisations. These organisations include Institutes of Technology or Polytechnics (ITPs), universities, wānanga and Private Training Establishments (PTEs). Inter-institutional collaboration in tertiary education has the potential to enrich any research project and provides a means to share good practice and investigate new directions across the sector. However, Wolff (2002) states, there is wide variation in outcomes and operations for many collaborative projects. Collaborative processes by definition are an intangible factor and are often overlooked in reporting or evaluation. These processes do have the potential to enhance or impede a project from reaching a fruitful conclusion, but when applied usefully can increase the shelf-life of a project team beyond its end date, and even assist in forming long-term, sustainable communities of practice.

This paper begins by outlining the project by considering how collaborations work within the New Zealand tertiary education context, relating to the work undertaken within Ako's Regional Hubs. It then outlines the national evaluation of collegiality within the Regional Hub projects the team has undertaken, and highlights key findings about the factors which participants identified that were significant, or less important, in building strong professional partnerships. Finally, it discusses the implications that these results have for Learning Advisors in Aotearoa, New Zealand.

The Project

Early in 2014, a team of five researchers representing three Institutes of Technology and Polytechnics (ITPs) were granted Regional Hub funding which drew on support from all three Hub sectors. Part of the project rationale was that while Ako Aotearoa monitors quality and outcomes of each project, there has been little reporting of the work behind the scenes, and the processes by which the work took place. The research team's impression, from having been involved in a number of collaborative research projects, was that it was highly likely that the longevity of the newly forged professional community, and the ongoing value to members, was largely due to the intangible factors: the relationships and interactions within the collaboration itself. Therefore this research project is an investigation of the factors that constitute good collaboration.

In order to define our focus on these often unexamined facets of collaborative research, a series of specific research questions were developed. This report focuses on just one of those questions which relates to the findings of the third phase (the survey) of the project:

- What are the collaborative factors that make inter-institutional collaborations successful and how was the collaboration best measured?

The objective of the project was to produce a Good Practice Guide for building, fostering and sustaining future Regional Hub inter-institutional collaborations as a stand-alone resource to assist other research teams.

Project Phases

At the time of sharing this research with ATLAANZ conference attendees, and writing this paper, the project is in its third of four phases. The project began with a literature review to inform the research, to guide the team's collaborative practice as they carried out the evaluation. The team also found value in examining work and commentary around the use of the selected survey tool and ensuring any identified flaws or features were addressed in their application.

The second phase was a document analysis of over 110 completed Regional Hub projects published on the Ako website. Only those which included inter-institutional collaborations were relevant to this study. In total there were forty-four applicable projects.

The third phase, an online survey, which is now complete, will be discussed in this paper. This survey was sent to individual team members of those eligible projects. The Wilders Collaboration Factors Inventory was used as a basis for the survey (Mattessich, Murray-Close, & Monsey, 2001). The data collected from the survey was analysed and used to inform subsequent phases and reporting.

The fourth and final phase of the research is yet to be conducted. It will consist of a series of semi-structured interviews with a representative sample of participants, regarding strategies, longevity, and outcomes. Six stories of participants' experiences from separate projects in each Hub will be collected, providing eighteen mini-case studies of inter-institutional collaborative experience. This is when the qualitative data from the case studies will be compared with the quantitative data from the surveys.

Rationale

From the outset it was decided by the research team that quantitative data was required to answer the research question. It was decided to use an online survey with the participants. With so many strands to the discussions around collaboration, it seems clear that there is no single factor responsible for ensuring successful outcomes; rather that institutions need to align several factors to suit the context (Mattessich, Murray-Close & Monsey, 2001). This is the rationale for both the development of the Wilders Collaboration Factors Inventory survey tool itself, which measures a range of contributing factors in several different domains, as well as for its selection by the research team involved in this project. However, there are advantages and disadvantages in the use of surveys for educational research.

One of the advantages of surveying participants is that surveys are easy to administer. In particular, conducting an online survey allows for data collection from participants in remote locations. Additionally, many questions can be asked about a subject, which gives extensive flexibility when the data is analysed (Wyse, 2012).

Barnham (2012) notes that the increase in the use online surveys in the last ten years has led to more positive responses from research participants. He claims that this is due to the unsupervised nature of such surveys, where participants complete questions on a computer or mobile device in a familiar environment, and may be completing the form hastily, without allowing time for asking questions or reflecting on their responses. This is at odds with former methods where survey participants were questioned in a neutral environment, usually selected so as not to distract participants or researchers with external demands on their attention. Fulgoni (2014), too, expresses concern about the quality of the responses gathered in online environments.

Hutchinson and Allnock (2014) argue that these concerns can be overcome so long as researchers recognise and address the associated challenges of conducting online surveys. They state that there are four methodological challenges that confront researchers: firstly, the construction of a representative sample; secondly, the identification of participants; thirdly, participant response rates; and lastly, questionnaire design. Each of these challenges have been considered by the research team.

Wilders Collaboration Factors Inventory Tool

The Wilders Collaboration Factors Inventory Tool first came to the team's attention through a previous Aotearoa project (Honeyfield & Fraser, 2012), when it was found to prompt extremely insightful responses from participants. Yet before this tool was automatically adopted, a number of alternative surveys/questionnaires were considered. A turning point for the team was the decision to adopt Wilders Collaboration Factors Inventory Tool for the evaluation of collaborative projects. These authors observed that while multiple studies have developed checklists and models, many of these are specific to a particular context or discipline. Examples and approaches which they analysed included the "Group Satisfaction Survey"; "Assessing the Group"; a "Climate Diagnostic Tool" (measuring the 'Six R's of Participation': recognition, respect, role, relationship, reward, results); an "Inclusivity Checklist"; and "Sustainability Benchmarks" (p. 23).

The research team concluded that The Wilder Collaboration Factors Inventory was an effective tool for this "Assessing the Group" style research because it measures

collaboration at the three critical waypoints of process, outcome and impact, at the following levels:
• The effectiveness of a group, including leadership, decision-making ability and ability to achieve goals
• The level of collaboration achieved within the group
• The group members' belief in the credibility and image of the collaboration within the greater community (Whaley & Weaver, 2010, p. 18)

Also pertinent to the current study are two of the above authors' key conclusions: "Self-assessment tools seem to be the approach used most often for measuring collaboration" and "The final list of indicators should be a balanced mix of quantitative and qualitative measures so that a more realistic picture of what has happened is described" (Whaley & Weaver, 2010, p. 30). The Wilders Collaboration Factors Inventory Tool *is* a self-assessment data collection method, and the quantitative information it would yield would be supported by the qualitative narratives gained from the follow-up interviews.

Based on the above, the team's preference for using the Wilders Collaboration Factors Inventory as the basis for the online survey phase of the research was confirmed. This widely used inventory provides twenty indices and forty factors by which to gauge participants' engagement in the collaboration and allows calculation of a mean rating for each factor, creating a sound measure by which to compare projects. The developers of the tool have made it freely available to any organisation or collective wishing to evaluate the strengths and shortcomings of their collaboration and teamwork. They also encourage customisation of the tool to better suit the context. There are numerous published examples of variations to the template available online in links from the developers' website (Wilder, n.d.).

However, the initial research proposal to Ako Aotearoa also required the team to examine the longer-term effects and sustainability of the Ako-funded collaboration, beyond the end-point of the research study itself. Accordingly we developed an additional ten questions over four new domains: Post-research benefits; Learner benefits; Retention/workplace satisfaction; and Personal value (see Appendix 1).

Method for conducting the survey

The research team were already using Microsoft OneDrive, a cloud based storage system, for sharing and editing documents and for file management. An additional feature of OneDrive is the ability to create online surveys. The main advantage was that respondent data automatically uploaded into Microsoft Excel, thus facilitating the process of analysis.

The survey was created and a nominated team member transferred the Inventory tool into the survey software. The survey was designed using a 'likert scale' where responses were 'Strongly Agree', 'Agree', 'Neutral', 'Disagree' and 'Strongly Disagree'.

The survey was then piloted with four colleagues and all five members of the research project. Based on their suggestions, minor changes were made, such as substituting the term "tertiary sector" for "community" in the first two factors (Appendix 1.). Once changes were agreed collaboratively, the survey was emailed to the 121 respondents who had participated in one or more of the forty-four Ako Aotearoa collaborative funded projects. A number of email addresses were not recognised, and further investigation was needed as

some of the original authors had moved on from the tertiary institute where the research had been conducted. After the original request, a second reminder email was sent as the aim was to receive as many responses as possible.

In total forty-one responses were received by the cut-off date, indicating a 34% response rate. These responses represented twenty-one projects. Ten projects were from the Northern Hub, three of the possible eleven from the Central Hub and nine from the twelve applicable projects in the Southern Hub. The responses represent 50% of the total projects. This is above average according to Penwarden (2014), who states that the average response rate for email surveys is 24.8%.

Limitations

Acknowledged limitations of this research include; firstly, there were no additional comment boxes for the survey. Respondents asked for extra space to add their comments. However, it was felt that this initial data collection method resulted in constrained yet focused data, and that the qualitative interviews would remedy this survey restriction. Secondly, it could be argued that there was a limited response rate and that the sample size was smaller than desirable; however, two separate emails were sent to all participants requesting the completion of the survey. The team did not want to pester people, although recognising that had we contacted them by phone, rather than email, a greater response may have been achieved. A final limitation recognised by the team is that in the survey structure, all questions had the option of not responding; however, this was deemed acceptable from the point of view that some responses were better than nil, and if respondents felt that the available responses were not fitting with their collaborative experiences they could choose to refrain from answering that question.

Findings and Discussion

The findings of the survey will be outlined within this section of the report. The findings are reported in two sections. Firstly, the Wilder's factors that were ranked highly are considered. Their high rating indicates that they were prominent in contributing to collaborative success. Secondly the Wilder's factors that were scored the lowest are considered. Their lower rating illustrates that these factors were not prominent in participants' projects and therefore was less likely to contribute to their collaborative success. The survey results are pertinent to Learning Advisors as they constantly work collaboratively, whether with students, in groups or in class (Cameron et al., 2014).

At this point of the research OneDrive became most effective because the data collected from the survey was automatically embedded in a Microsoft Excel document. From here we were able to score and rank the factors and projects. The factors were the items that participants felt had contributed to the quality of their collaborative work and the satisfaction they had received from being part of the team (and *not* to the successful outcomes from the project; all eligible projects were drawn from a pool of published, completed studies, so that this was not something we were evaluating).

It was decided to score the responses using +2 for 'Strongly Agree'; +1 for 'Agree'; 0 for 'Neutral'; -1 for 'Disagree'; and -2 for 'Strongly Disagree'. There were fifty questions and therefore the highest score a factor could receive was +100 and the lowest was -100. The majority of factors contained multiple questions, which were then averaged. Analysing the

rating of the factors highlighted that those with a high score showed a positive response and were present in each of the collaborative projects that responded to the survey. The factors were then ranked in order from highest to lowest. The next two subsections will consider the top ranked and bottom ranked factors in turn.

Top ranked factors

Table 1: *Top ranked factor scores* (See Appendix 1.) (n=41)

Ranked	Factor	Strongly Agree	Agree	Disagree	Strongly Disagree	Total
1	Skilled Leadership	50	13.0	-1.0	0.0	62.0
2	Personal Value	58	7.0	0.0	-4.0	61.0
3	Mutual Respect, Understanding & Trust	50	12.5	-2.0	0.0	60.5
4	Establish informal relationships and communication links	44	16.5	-0.5	0.0	60.0
5	Concrete, attainable goals and objectives	44	16.0	-0.7	-2.0	57.3

Table 1 above shows the top ranked factors participants rated as important in their team process. The numbers in the table were derived from allocating scores from +2 to -2 to each item, and then averaging them for each factor, as described above. The factor that ranked the highest was 'Skilled leadership'. This related to just one question which asked whether leaders in the project possessed good skills for working with people and organisations. Twenty-five respondents 'strongly agreed' (at +2 each, giving a score of 50) and thirteen 'agreed' (+1, giving a score of 13) with this comment, while only one respondent 'disagreed'. It is apparent therefore, that 38 of the 41 respondents considered skilled leadership a highly important component of successful effective collaboration, confirming Olson et al.'s (2011) finding that it was an essential ingredient in effective group work. The importance of this factor, in a learning advisory context, has been discussed by Ayo and Fraser (2005). They concluded that skilled leadership encompassed 'generosity of spirit' and a sense of 'goodwill in sharing' in order to grow capability.

The 'Personal Value' factor was not an original factor present in the Wilders Collaboration Factors Inventory; this was an addition by the project team. As part of the research it seemed fitting to identify whether involvement in the collaborative project was a rewarding experience for participants and that this contributed to a fulfilling collaborative experience for project team members. There were twenty-nine respondents who 'strongly agreed' (a score of 58) and seven who 'agreed' (a score of 7) with the statement and only two respondents who 'strongly disagreed' (-4). Since this factor rated second most important by respondents, it may be the case that research collaborations that engender personal learning

for collaborators tend to be more successful collegial experiences, and encourage team members to work together in new endeavours once the original project has been completed. Anecdotally, this seems to be the case with Learning Advisors, who as a group tend to want to develop their practice and foster student learning. Such development could be through the enhancement of professional relationships either by collaborative practice or mentoring (Ayo & Fraser, 2005).

'Mutual respect, trust and understanding' is a factor that according to the literature is prevalent within collaborations. This factor ranked third behind 'Personal Value' by half a point, which indicates how important it is. Over thirty-seven of the forty-one respondents had a positive response for this factor. This was unsurprising as Kinnula & Juntunen (2005) state that trust, openness and flexibility are a relationship factor and this type of factor is valued higher than business factors in their research. Their findings indicate that business success was assumed, and the building and maintaining of relationships between organisations was seen as more important. Additionally, informal relationships between organisations were seen to be crucial.

The respondents cited that 'Informal Relationships' were very important in any collaboration and this is borne out by the fact that the difference between the first and fourth placed ranking factor was minimal. The findings illustrate that there were far fewer 'Strongly Agree' responses, but an increased number of 'Agree'. This identifies that although establishing informal relationships and communication links were ranked highly, they were not as prevalent as other factors. Because of the importance of this factor, Learning Advisors may benefit from continuing to develop these types of relationships with other academic staff to strengthen collaborative approaches in the Learning Advisory field (Ayo & Fraser, 2005).

Another factor that was scored highly by respondents during the course of their collaborative research was having 'Attainable Goals and Objectives'. This is likely to be the focusing point for collaborations. This would also be a focus point for Learning Advisors and other staff in their work. For example, Fraser, Manalo and Marshall (2005) demonstrate this factor in a learning advisory context, where their collaborative focus was to report on programmes that demonstrated tangible benefits to students in terms of retention, pass rates and completions. Additionally, Bartol et al. (2011) state that having attainable goals which are generated from collaborative relationships, allow for the management and planning of activities, which not only foster vertical and horizontal communication, but also ultimately ensure participant satisfaction.

The lowest ranked factors will be considered in the next subsection.

Lowest ranked factors

Table 2: *Lowest ranked factor scores (See Appendix One)*

Ranked	Factor	Strongly Agree	Agree	Disagree	Strongly Disagree	Total
20	Retention/workplace satisfaction	21.3	13.3	-4.3	-2.0	28.3
21	Sufficient funds, staff, materials, and time	19.0	17.5	-9.0	0.0	27.5

22	Collaborative group seen as a legitimate leader in the tertiary sector	14.0	18.5	-3.5	-2.0	27.0
23	History of collaboration or cooperation in the tertiary sector	10.0	15.0	-7.5	-2.0	15.5
24	Multiple layers of participation	16.0	0.0	-7.0	-8.0	15.0

Table 2 above shows the lowest ranked factors participants rated as important in their team process. Although these factors were ranked lowest, they were still positively scored by respondents, given that the range of scores was between +100 and -100.

'Retention/Workplace satisfaction' did score a reasonably high result for 'Strongly Agree' and 'Agree' but was not as positively regarded as other factors such as 'Skilled leadership' and 'Personal value'. This factor may not be crucial for Learning Advisors, as in most cases it would seem that as a group they enjoy and are committed to their work. Anecdotal comments by known Learning Advisors suggest that this is the case. Owler, a Learning Advisor at Auckland University of Technology (AUT), has published numerous papers on the importance of internal motivation and 'fun at work'. She suggests that this improves employee confidence, helps develop collaborative relationships, and ultimately ensures staff retention and workplace satisfaction (Owler, 2012; 2008).

'Sufficient funds, staff, materials, and/or time' scored in the bottom five of the ranking at 27.5, illustrating that funding, staffing, materials and or time often did not meet the needs of the project. Again, this finding would resonate with many Learning Advisors whose work roles are often restricted by organisational reviews, restructures and resourcing constraints. Associated with this is the difficulty of allocating time to work which may show only intangible benefits, and may be very difficult to correlate with improved outcomes for students. This would certainly be the case in most Learning Centres, where the demand for Learning Advisors' services by both staff and students is often high.

'Collaborative group seen as a legitimate leader in the tertiary sector' also ranked low which indicates that project members did not feel that others in the industry would necessarily see them as either the right organisation to complete the project or indeed would not expect that they would achieve a final result. This is in contrast to their own view of themselves as project members, i.e. 'Personal Value' was ranked second overall. So, as members they viewed their project as a rewarding experience. The low ranking for this factor could gel with Learning Advisors in their collaborative relationships. As a group, Learning Advisors may not feel that others see them as an integral component in New Zealand tertiary education. For example, Pocock (2010) states that collaboration with non-learning advisory staff is the key component for Learning Advisors to be able to offer effective learning support to students in tertiary education.

'History of collaboration or cooperation in the tertiary sector' indicates that many project participants felt that collaboration in the tertiary sector was not common and had not been done to a great extent in the past. Yet, for Learning Advisors, the scoring of this factor

would seem strange, as much of what they do in their day to day work involves collaborating either with staff or students. Perhaps the lower score here indicates that other colleagues may not have had such pan-institutional exposure to different ways of thinking and working as Learning Advisors do in their daily practice – so this may be another area in which Learning Advisors have expertise they can share outside their own team.

Finally, the factor that scored the lowest was 'Multiple layers of participation'. This result indicated that participants did not feel that they could represent their whole organization. In some instances they felt that they did not have enough time to confer with colleagues outside of the project group to inform their project based decisions. This result would also apply in the case of Learning Advisory practice. For example, survey results indicate that there was not always enough time to consult with colleagues, a situation in which Learning Advisors often find themselves.

It is interesting that some factors were not ranked as highly as expected, for example 'flexibility', 'ability to compromise' and 'communication' were not as prevalent in the responses. As previously discussed, all projects were successful, but the results indicate that increased communication, for example, may have resulted in the project team's sustainability with participants continuing with collaborative research or building mutually beneficial communities of practice.

The scoring of factors was a useful method to analyse the responses, so it was decided to score the projects using the same system to gauge the quality of the collaborative practices. Multiple responses from each project were averaged resulting in a final rank. It is important to stress that this national hub research project is investigating the collaborative factors of successful Ako Aotearoa's funded projects. In no way does our research undermine the success of the projects, it merely analyses the way in which the collaborative nature functioned.

Using the previous factor scoring system for the individual project identifies that the maximum score a project could achieve was 100 with the lowest score being -100. The projects all scored between one and 79. There was a definite difference of individual perceptions for some projects and this did impact the average score. There appeared to be no project that illustrated a completely negative perception from all participants regarding the collaborative nature of the project they were involved in. This data has not been generated for publication or discussion, but rather, solely as a means to indicate to the research team which participants from which projects would be preferable interview candidates and might have an interesting story to tell.

This analysis will form part of phase four of this project, as outlined above, where the qualitative data from the case studies will be compared with the quantitative data from the surveys.

Conclusion

The survey respondents provided an initial insight into the key factors that facilitate successful collaborations within their project. The factors ranking highest as traits which participants saw as critical to the collaborative process and relationship were 'Skilled leadership', 'Personal value', 'Mutual respect, understanding and trust', 'Establishment of informal relationships and communication links' and 'Concrete, attainable goals and objectives'. The factors that individual respondents highlighted which were not prevailing within their collaborative project team interactions were: 'Multiple Layers of Participation',

having a 'History of Collaboration', 'The collaborative group seen as a legitimate leader', having 'Sufficient funds, staff, materials and time' and 'Retention and Workplace Satisfaction'.

This research only considers successful (completed and published) Ako projects, and the focus is very much on uncovering good practice that leads to successful and fulfilling inter-institutional partnerships. This research is intended to be practical and applied in its outcomes, with a high relevance to the tertiary learning advisory sector and the wider community. There are strong links between the traits and attributes of effective collaborative relationships, and the space Learning Advisors inhabit. Learning Advisors not only work collegially to grow capability and capacity for students and staff, they are often highly adept at working across faculties and disciplines, traversing levels from foundation to post-graduate. It is up to LA's, as a profession and ATLAANZ as a community, to promote our skills in collaboration, and seek out opportunities to work with external, as well as internal colleagues. The factors identified in this paper may provide a starting point to strengthen this kind of collaborative work.

As a team, the authors have enjoyed working collaboratively undertaking this research, and hope that the interim results from the survey will be beneficial, especially to tertiary learning advisors. This paper has provided reflections from participants who have worked collaboratively and this may be of use to LAs who may be considering inter-institutional research collaborations or collaborating internally with colleagues in their advisory capacity with learners. We intend to research this topic further by analysing qualitative data from the case studies and reporting this in later conferences so that others in our tertiary learning advisory community are able to access and apply successful strategies in inter-institutional collaborative practices to their own projects.

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Appendix: The customised Wilders Collaboration Factors Inventory

Factor	Original Statement	Our Revised Statement
History of collaboration or cooperation in the tertiary sector	1. Agencies in our community have a history of working together. 2. Trying to solve problems through collaboration has been common in this community. It's been done a lot before.	1. Colleagues in the tertiary sector have a history of working together. 2. Trying to solve problems through collaboration has been common in the tertiary sector. It's been done a lot before.
Collaborative group seen as a legitimate leader in the tertiary sector	3. Leaders in this community who are not part of our collaborative group seem hopeful about what we can accomplish. 4. Others (in this community) who are not part of this collaboration would generally agree that the organizations involved in this collaborative project are the "right" organizations to make this work.	3. Leaders in the tertiary sector who are not part of our collaborative group seem hopeful about what we can accomplish. 4. Others (in the tertiary sector) who are not part of this collaboration would generally agree that the organizations involved in this collaborative project are the "right" organizations to make this work.

Favorable political and social climate	5. The political and social climate seems to be "right" for starting a collaborative project like this one. 6. The time is right for this collaborative project.	5. The political and social climate seemed to be "right" for starting a collaborative project like ours. 6. The time was right for our collaborative project.
Mutual respect, understanding, and trust	7. People involved in our collaboration always trust one another. 8. I have a lot of respect for the other people involved in this collaboration.	7. People involved in our collaboration always trusted one another. 8. I have a lot of respect for the other people involved in our collaboration.
Appropriate cross section of members	9. The people involved in our collaboration represent a cross section of those who have a stake in what we are trying to accomplish. 10. All the organizations that we need to be members of this collaborative group have become members of the group.	9. The people involved in our collaboration represent a cross section of those who have a stake in what we were trying to accomplish. 10. All the organizations that we needed to be members of this collaborative group have become members of the group.

Members see collaboration as in their self-interest	11. My organization will benefit from being involved in this collaboration.	11. My organization has benefitted from being involved in this collaboration.
Ability to compromise	12. People involved in our collaboration are willing to compromise on important aspects of our project.	12. People involved in our collaboration were willing to compromise on important aspects of our project.
Members share a stake in both process and outcome	13. The organizations that belong to our collaborative group invest the right amount of time in our collaborative efforts. 14. Everyone who is a member of our collaborative group wants this project to succeed. 15. The level of commitment among the collaboration partners is high.	13. The organizations that belonged to our collaborative group invested the right amount of time in our collaborative efforts. 14. Everyone who is a member of our collaborative group wanted this project to succeed. 15. The level of commitment among the collaboration partners was high.

Multiple layers of participation	16. When the collaborative group makes major decisions, there is always enough time for members to take information back to their organizations to confer with colleagues about what the decision should be. 17. Each of the people who participate in decisions in this collaborative group can speak for the entire organization they represent, not just a part.	16. When the collaborative group made major decisions, there was always enough time for members to take information back to their organizations to confer with colleagues about what the decision should be. 17. Each of the people who participated in decisions in this collaborative group could speak for the entire organization they represented, not just a part.
Flexibility	18. There is a lot of flexibility when decisions are made; people are open to discussing different options. 19. People in this collaborative group are open to different approaches to how we can do our work. They are willing to consider different ways of working.	18. There was a lot of flexibility when decisions were made; people are open to discussing different options. 19. People in this collaborative group were open to different approaches to how we could do our work. They were willing to consider different ways of working.

Development of clear roles and policy guidelines	20. People in this collaborative group have a clear sense of their roles and responsibilities. 21. There is a clear process for making decisions among the partners in this collaboration.	20. People in this collaborative group had a clear sense of their roles and responsibilities. 21. There was a clear process for making decisions among the partners in this collaboration.
Adaptability	22. This collaboration is able to adapt to changing conditions, such as fewer funds than expected, changing political climate, or change in leadership. 23. This group has the ability to survive even if it had to make major changes in its plans or add some new members in order to reach its goals.	22. This collaboration was able to adapt to changing conditions, such as fewer funds than expected, changing political climate, or change in leadership. 23. This group had the ability to survive even if it had to make major changes in its plans or add some new members in order to reach its goals.

Appropriate pace and development	24. This collaborative group has tried to take on the right amount of work at the right pace. 25. We are currently able to keep up with the work necessary to coordinate all the people, organizations, and activities related to this collaborative project.	24. This collaborative group tried to take on the right amount of work at the right pace. 25. We were able to keep up with the work necessary to coordinate all the people, organizations, and activities related to our collaborative project.
Open and frequent communication	26. People in this collaboration communicate openly with one another. 27. I am informed as often as I should be about what goes on in the collaboration. 28. The people who lead this collaborative group communicate well with the members.	26. People in this collaboration communicated openly with one another. 27. I was informed as often as I would be about what went on in the collaboration. 28. The people who led this collaborative group communicated well with the members.

Establish informal relationships and communication links	29. Communication among the people in this collaborative group happens both at formal meetings and in informal ways. 30. I personally have informal conversations about the project with others who are involved in this collaborative group.	29. Communication among the people in our collaborative group happened both at formal meetings and in informal ways. 30. I personally had informal conversations about the project with others who were involved in this collaborative group.
Concrete, attainable goals and objectives	31. I have a clear understanding of what our collaboration is trying to accomplish. 32. People in our collaborative group know and understand our goals. 33. People in our collaborative group have established reasonable goals.	31. I had a clear understanding of what our collaboration was trying to accomplish. 32. People in our collaborative group knew and understood our goals. 33. People in our collaborative group had established reasonable goals.

Shared vision	34. The people in this collaborative group are dedicated to the idea that we can make this project work. 35. My ideas about what we want to accomplish with this collaboration seem to be the same as the ideas of others.	34. The people in our collaborative group were dedicated to the idea that we could make this project work. 35. My ideas about what we wanted to accomplish with this collaboration seem to be the same as the ideas of others.
Unique purpose	36. What we are trying to accomplish with our collaborative project would be difficult for any single organization to accomplish by itself. 37. No other organization in the community is trying to do exactly what we are trying to do.	36. What we were trying to accomplish with our collaborative project would be difficult for any single organization to accomplish by itself. 37. No other organization in the community was trying to do exactly what we were trying to do.
Sufficient funds, staff, materials, and time	38. Our collaborative group had adequate funds to do what it wants to accomplish. 39. Our collaborative group has adequate "people power" to do what it wants to accomplish.	38. Our collaborative group had adequate funds to do what it wanted to accomplish. 39. Our collaborative group had adequate "people power" to do what it wanted to accomplish.

Skilled leadership	40. The people in the leadership positions for this collaboration have good skills for working with other people and organizations.	40. The people in the leadership positions for this collaboration had good skills for working with other people and organizations.
New Questions		
Post-research benefits		41. I have continued to work with members of the original collaborative group in new areas/activities. 42. Involvement in our collaborative project has led to other personal or professional opportunities. 43. Participation in the original collaborative project has encouraged me to join other collaborative groups.
Learner benefits		44. My students have benefitted from my involvement in our collaborative project. 45. Students in my organization have benefitted from the outcomes of our collaborative project. 46. My teaching/professional practice has been enhanced through my involvement in our collaborative project.

Retention/workplace satisfaction		47. My involvement in our collaborative project has contributed towards my workplace satisfaction. 48. My organization has valued my participation in our collaborative project. 49. My involvement in this collaborative project has contributed to my desire to remain with my current organization.
Personal value		50. Involvement in our collaborative project was a rewarding experience.