

**Intra-cohort relationships in cross-cultural training:
A mixed methods study of the importance of intra-cohort
relationships to three dimensions of growth and learning.**


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This dissertation is presented for the degree of
Doctor of Education
of AGST Alliance

2021

DECLARATION OF ORIGINALITY

I declare that this dissertation is my own account of my research and contains as its main content work which has not previously been submitted for a qualification at any tertiary education institution.


..... 14-May-2021

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ABSTRACT

This mixed methods study explores how intra-cohort relationships formed in an agency-based residential pre-field training course for cross-cultural workers are important to the development of participants during the course and subsequently in the dimensions of instrumental, communicative, and reflective learning. Most literature in the field of missionary training naturally concentrates on the importance of relationships between staff and trainees. This study addresses a gap by seeking to identify and quantify the contributions of fellow trainees towards three dimensions of growth and learning.

This topic was examined with respect to the 19-week training course at St Andrews Hall conducted by CMS-Australia. The study used a three-phase exploratory sequential design. In the first phase concepts to explore were distilled from focus group interviews with 15 former trainees and two individual staff interviews. In the second phase 125 former trainees completed an online survey. In the third phase quantitative data analysis established a feasible model of these three dimensions of growth and learning and used this to estimate the relative contributions of fellow trainees amongst a group of six influences.

The findings suggest that typically, fellow trainees contribute little to Instrumental Learning (of the order of 5%), but make significant contributions to Communicative and Reflective Learning (of the order of 15-25% each). The study also found quantitative support for the common-sense observation that younger trainees tend to learn from older trainees, especially in these two latter areas.

Post-course, cohort friendships may provide relational support but do not appear to substantially enhance growth and learning.

These findings endorse residentially based missionary training. However, they suggest that in supporting ongoing growth and learning it would be preferable to base communities of practice upon type of work rather than upon original training cohorts.

ACKNOWLEDGEMENTS

The model of learning I have inhabited for these few years informs the ways I think about what I have learnt from others. It has widened my awareness of that indebtedness and there are too many to name here but I offer general thanks.

I acknowledge those with whom I've journeyed in the community of learning at AGST-Alliance, including the faculty, those in my cohort, and those who have interacted in the doctoral colloquiums. Particular thanks to Dr Sooi Ling Tan and Dr Rosalind Tan and my constantly encouraging supervisor, Dr Allan Harkness.

I acknowledge the assistance of Dr Martin Dowson and Dr Sandy Clarke-Errey who have each guided me in statistical analysis. The methods were suggested by them, but I accept the errors.

I owe further thanks to Peter Rodgers, David Williams and all the staff in CMS-Australia and at St Andrews Hall who have permitted and supported this study. Similarly I acknowledge that this study would not have been possible without the summed hours contributed by those who participated in interviews and surveys. I am deeply grateful for their commitment to this research and this institution.

As I write these acknowledgements, I have learnt of the passing of a prominent missiologist of our generation, Dr Richard Hibbert. I have known Richard and Evelyn since our university days. I am deeply grateful for the brief times I spent in conversation with each of them in preparation for this research and for their writings upon which I have drawn here.

I'm thankful too for the long-term support of the Alphabet group which has gathered to share and pray for some 35 years. My particular thanks to Rosemary Williamson for her patient proofreading and encouragement.

I thank my examiners, Dr Ruth Wall and Dr Stephen Fyson, for informed insights and helpful suggestions. Each has encouraged the addition of sections which have made this dissertation more complete.

Finally, I am grateful for the steadfast support of my family, both active and passive. I'm thankful for my late mother's constant belief in me and my father's example of

costly devotion and godly wisdom. I deeply appreciate the allowances given to their father by Samuel, Thomas, James, and Benjamin, and the unfailingly loving acceptance of their mother, my dear wife, Marlene. Thank you.

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ABBREVIATIONS AND KEY TERMS

CMS-Australia	Church Missionary Society - Australia
CL	Communicative Learning
Community of Practice	A community of people where the primary activity of members is not learning but some common interest, profession, or 'practice' in which they might all be separately or corporately engaged but from which periodically they might briefly refrain in order to gather and consolidate practice-relevant learning.
DGL	Dimensions of Growth and Learning, namely instrumental (IL), communicative (CL), and reflective (RL).
IL	Instrumental Learning
Intra-Cohort Relationships	Relationships between adult trainees in the same training cohort.
Learning Community	A community of people gathered together for the primary purpose of learning for a substantial period of time, and substantially separate from any active engagement in 'practice'.
LXX	The Septuagint, German Bible Society, 2006
NASB	New American Standard Bible, 1995.
NETS	A New English Translation of the Septuagint, OUP, 2007/2009
RL	Reflective Learning
SAH	St Andrews Hall

CHAPTER 1

INTRODUCTION

How should we prepare those going into cross-cultural missionary service? What knowledge and skills will they need? What kind of character should they have, including their Christian commitment and maturity? How do we want them to relate to others? In the past such preparation has been achieved by training in residential community settings. However, such training can be inconvenient and costly and, with many alternatives around, those making such training decisions need to be good stewards of both purpose and purse. So in each generation it is appropriate to reconsider: Why should missionaries be trained together in residential communities?

The purpose of this study is to explore the importance of relationships between fellow trainees on growth and learning in a specialised missionary training course conducted in a residential community setting. This chapter summarises the context for the study, aims, research questions, overall methodology, and the layout of the dissertation.

1.A Background Context

Missionary society leaders and trainers have long advocated for specialised missionary training to be conducted in residential community settings. Over 200 years ago the founders of The Church Missionary Society in the UK (CMS-UK) noted the need to obtain and train “spiritual men for spiritual work” (Stock 1899, xiii, 63, 71).¹ Specialised residential training was soon brought in-house (in response to issues of both interpersonal friction and ethical failure) (Stock 1899, 87–88). This advocacy over the years has recognised the benefits of residential community settings in training and preparation both for the individual (for example C. D. Harley 1995, 32–35; E. Hibbert and Hibbert 2016, 82–85; Wan and Hedinger 2017, 195–96) and for the organisation’s assessment of candidates (Dain 1959, 12). Specialised

¹ The contemporary understanding of “spiritual” is expanded in a later quote, “Not that all Evangelicals were spiritual : that has never been the case ; but that spiritual men, generally speaking, were assumed to be Evangelicals” (Stock 1899, 274).

training has also been shown to correlate with longevity in missionary service (Hay et al. 2006, 115–26).

However, the residential approach is coming under increasing pressure. It is costly for both organisations and individuals, and disruptive, especially for those who relocate with school-age children (C. D. Harley 1995, 33–34).² Various face-to-face training alternatives have long existed including, non-residential, part-time, and short intensive courses. Online education has also arisen (Wan and Hedinger 2017, 197–99) and, as of writing in the first year of COVID-19, travel and contact restrictions have forced many educational institutions at all levels and in almost all places to abruptly move studies online. Some have done so eagerly, others more reluctantly. In many cases it is now an open question whether missionary training courses will return to face-to-face, let alone to residential community settings.

Those who now advocate for residential training face the mounting challenge to show why missionary training is best done in community. Such advocates might need to concede ways in which online education has been shown to be convenient, flexible, cost-effective, efficient, and scalable. On the other hand, if training in residential community is to be sustained, a sufficient case needs to be presented that identifies some important areas of growth and learning for which such training is clearly superior.³

An important step in the case for residential training is to once again resist the implicit assumption that education is confined to delivery of informational content. Moves towards course validation and accredited qualifications almost inevitably focus on what can be verified by objective measurement of acquired knowledge and skills, but this threatens important “personal, pastoral and practical elements of courses” (Global Connections 2006, 30,32; Wall 2015, 11). Philosophers and educators note the intrusion of such positivist thinking, pointing out that human

² Ruth Wall has rightly pointed out that for many from non-Western countries there are few affordable and accessible training options (private communication, 2021).

³ The researcher notes that the current study identifies some such important areas of growth and learning but does not take the next necessary step, comparing with other training methods.

interests extend to relational and reflective dimensions of knowledge which are inherently subjective and less easily measured (Habermas 1971; Mezirow 2009). More pragmatically, businesses and governments over the last few decades have pressured tertiary institutions to recognise that an important part of their role is to prepare graduates not only equipped with discipline-specific knowledge and skills but who are also able to work with other people and who exhibit appropriate ethics and character (Higher Education Council (Australia) 1992, 20). If such kinds of graduate attributes should be included as outcomes of general tertiary education, how much more should this be true of those who are being trained to be sent as ambassadors of Christ and his church?

Christian educators in particular note the ways in which the hidden curriculum behind conventional assessment privileges individualistic “head knowledge” whilst neglecting the inner world of the heart, with the results that trainees replicate this knowledge bias in ministry and even tend towards manipulation of others and the world rather than engaging as “mutually responsible participants” (P. J. Palmer 1993, 34–39; P. W. H. Shaw 2006, 87).

A general rationale for residentially based training argues that cross-cultural missionary work entails a whole-of-life commitment and warrants training that also engages the whole-of-life. Whilst it is expected that Christian missionaries will be reliable, even skilled, interpreters of the Bible and there is indeed much helpful discipline-specific knowledge which can greatly assist in orientation towards a new culture and living situation, arguably the primary work of missions, presenting the gospel, is predominantly done in the context of relationships (E. Hibbert and Hibbert 2016, 73–78), that is, forming and growing relationships with other people, and living a life of integrity in a relationship of obvious, obedient dependence upon God.

Learning is often done in community and thus in relationships and it is important to discover how these facilitate growth and learning in broader areas. Typically, researchers turning their attention to teaching and learning in community write as educator-practitioners, reflecting upon ways to enhance trainee learning through improvements in their own performance. These teacher-student relationships are clearly of great importance and the teacher’s adjustments here can have substantial

leverage towards educational outcomes. However these are not the only relationships in such a community, nor are they the most common.

The nature and influence of relationships between fellow trainees are barely mentioned (P. J. Palmer 1993, xvi) and generally not studied. Such relationships might seem to be of random quality and largely outside of a teacher's influence, and sometimes even be seen as a problem (Jaffee 2007; Watts 2013). Yet even this latter observation hints at their potential importance. These relationships can introduce both damaging conflict and restorative support, yet all of these elements can be helpful, as they replicate real experiences of life (E. Hibbert and Hibbert 2016, 82–83). Even in a small residential learning community there are likely to be many more trainee-trainee interactions than staff-trainee interactions. Thus, even if they are not as easily adjusted as staff-trainee relationships, they are likely to sum to a substantial contribution, particularly in the kinds of growth and learning that occur outside the classroom.

Similarly, relationships between trainees continue past the end of the course and could play a role in further growth and learning. Mission trainers have recognised the value of continued contact between staff and trainees in ongoing mentoring relationships (Wan and Hedinger 2017, 248). Anecdotally, those who train together often maintain such relationships long-term. Most of the current generation of Australian missionaries have also grown up with “the principle of lifelong education” as fundamental to government policy since 1988 (Dawkins 1988, 16, 68–69). Arising from these observations, it seems feasible that the growth and learning of the course could be usefully supported and continued by forming communities of practice based upon such training cohorts. There seems to be little research in this area. The feasibility of this idea could be explored by identifying what might already be happening without the outside facilitation of the organisation.

The research described here explores the importance of trainee-trainee relationships developed in the cohorts of an in-house residential community training course.

1.B Research Context

CMS-Australia established St Andrews Hall as an in-house residential training institution in 1964, and since then well over 1000 women and men have been trained there for missionary service in Australia and overseas. Missionary candidates are expected to already have the equivalent of one year of theological study, so the 19 week course presents more specific training for cross-cultural ministry. Currently there are about 200 adult missionaries with CMS-Australia, with all but a few having gone through a period of training at St Andrews Hall.

The present researcher returned to Australia after over a decade and half as a missionary with another organisation to take up a position on the pastoral staff of CMS-Australia with responsibility for up to 80 adult cross-cultural workers. That role includes visiting these workers on location. During such visits, conversations have often included the topic of their training. The vast majority of these workers speak highly and fondly of their time at St Andrews Hall and of the friendships they formed there. Such endorsements suggested there was something worth further investigation.

This research study forms part of an EdD program entered some years before return to Australia. Part of the motivation for this enrolment has been a recognition of the need for further personal development. Thus this researcher, in his role of pastoral support, has been predisposed towards helping others to advance their own growth and learning.

The present study arose out of these various interests and intuitions.

1.C Research Questions

As will be developed in later chapters, this study aims to explore the apparent gap in the study of missionary training considering how relationships between trainees in

the cohort enhance growth and learning in the three areas, domains, or dimensions⁴ of Instrumental Learning, Communicative Learning, and Reflective Learning, both during the course and subsequently.⁵

Here these dimensions are broadly identified with the labels and provisional descriptions respectively as:

Instrumental Learning (IL) – learning about the world and how to manipulate it;

Communicative Learning (CL) – learning how to get on with other people; and,

Reflective Learning (RL) – character and spiritual formation.

The study aims to estimate, amongst a number of other influences, the relative contribution of fellow-trainees towards growth and learning in these three areas, and identify some of the factors and/or mechanisms that might be important in any such influence.

The primary question guiding this research was:

“How are intra-cohort relationships formed in an agency-based residential training course for cross-cultural workers important to the development of participants during the course and subsequently in the dimensions of instrumental, communicative, and reflective learning?”

The Literature Review in the next chapter (10) explores concepts of potential importance to this primary question, including evidence for the three named dimensions. From this, four research sub-questions were developed (3.A.1, 72) to guide the field investigation:

⁴ All three terms are used with similar intent and the use by other authors overlaps. ‘Domain’ might convey the idea that learning and growth can be completely separated into these three areas and potentially occur at different times. This researcher prefers ‘dimension’ which recognises the essential unity of learning and growth, namely, that one usually learns with simultaneous but varying vector contributions in each dimension depending upon the learning context.

⁵ The researcher’s stance towards educational theories is briefly presented later (2.H, 56).

SQ1: “How do intra-cohort relationships contribute to instrumental learning of participants?”

SQ2: “How do intra-cohort relationships contribute to communicative learning of participants?”

SQ3: “How do intra-cohort relationships contribute to reflective learning of participants (particularly in spiritual and character formation)?”

SQ4: “In what ways do intra-cohort relationships continue to provide support and enhance learning in these three dimensions after leaving the specific training?”

1.D Methodology

The overall framework for this study was chosen as mixed methods, with an exploratory sequential design. This recognised that combining qualitative and quantitative enquiries would allow the exploration of multiple perspectives and facilitate a more complete understanding of the influence of intra-cohort relationships on learning than either methodology alone.⁶ The study took the form of an initial qualitative enquiry to identify key concepts, followed by exploration of these concepts using more quantitative methods and analysis. The first phase included focus group interviews with 15 former trainees and two individual staff interviews. In the second phase an online survey was designed and administered, with 125 responses collected from former trainees also, with many of the raw questions requiring no further analysis for useful interpretation. The third phase consisted of four tasks of more concentrated analysis on some of the data: first, using a confirmatory factor analysis to develop a representative model of the three dimensions of growth and learning; second, using this model to estimate the relative contributions of six different influences; third, exploring correlations between various question sets; and fourth, exploring various measures of the decay of relationships and communications post-course.

⁶ A fuller explanation of the choice of mixed methods is presented later (3.A.2, 70).

1.E Delimitations

The present study focuses only on the residential training course delivered at St Andrew's Hall, and upon those who have continued into missionary service with CMS-Australia. St Andrew's Hall also admits trainees from New Zealand CMS (~9-10%) as well as independent candidates (~4-5%) intending to work cross-culturally, overseas or within Australia. Together these have made up some 14-15% of trainees of the reference population. However it was decided to exclude them for several reasons: their backgrounds, selection, and reasons for training tend to be far more varied and would likely have increased confounding factors; the task of making contact would have presented logistic challenges; and this study was intended primarily for the benefit of CMS-Australia. It is noted that the delimitation criteria also excluded for similar reasons those who were accepted for training as long-term missionaries but did not proceed, and those from CMS-Australia who were expected to be short-term workers (nominally 3 months to 2 years of service) and who typically only complete part of the course. These delimitations are further discussed in the final chapter (6.C, 199).

Whilst the course at SAH has been a focus of interest, the present researcher has neither been a member of the teaching staff nor a member of any training cohort. However, the researcher's role with CMS-Australia included participation in the selection and assessment of candidates and regular visits to the training facility. With this in view, the potential conflicts of interest were addressed in the design of the study. Potential bias might also have been a factor, and the study began from a stance of appreciative enquiry as noted above (1.B, 5). With the support of the organization, the researcher attempted to be open and realistic about attitudes towards the institution, staff, and trainees, for example, being careful to encourage participation from those with negative experiences, recognising that these might be reluctant to come forward.

1.F Dissertation Outline

The dissertation is arranged in six chapters, with selected appendices.

Chapter 1 introduces the study.

Chapter 2 reviews literature in various fields of philosophy, education, psychology, biblical studies, and missionary training. It presents a picture of three dimensions of growth and learning. It also identifies an important place of communities of learners. A short section addresses the researcher's stance towards educational theories. Finally, an excursus tentatively situates this research within a three dimensional model of learning based upon the biblical triad of faith, love, and hope.

Chapter 3 presents the methodology used in this study. It begins by establishing the research questions, discussing the overall mixed methods approach, and describing the trainee population. The three phases are then described: focus group interviews; an online survey; and then four particular tasks of detailed quantitative analysis.

Chapter 4 presents the results in substantially the same order as chapter 3.

Chapter 5 presents and discusses the relevant findings. This is divided into some general findings, then specific findings on each of the dimensions of growth and learning and the way that relationships with fellow trainees contribute to learning during the course. Finally, some findings about post-course interactions are presented.

Chapter 6 summarises the findings with explicit answers to each of the four research sub-questions. Points of significance and implications are highlighted along with limitations and areas for further study. Observations and recommendations specific to the organisation of interest are presented briefly.

Appendices are provided to the various parts of this study arranged in order of the most relevant chapter and section. The quantitative analysis used in this study included hundreds of pages of output and only summaries have been included here.

CHAPTER 2

LITERATURE REVIEW: UNDERSTANDING RELEVANT THEORY AND THE RESEARCH CONTEXT

The topic of this enquiry is the training of missionaries, focusing on the contribution of relationships between trainees towards growth and learning in a pre-field training course which has been run for over 50 years. The following theoretical review has been focused on the intersection of three bodies of material relating to tertiary and adult education; pre-field missionary training; and organisational practice.

It is appropriate to preface this review with some initial assumptions about approaches to teaching and learning and the goals for education, specifically with respect to the training of Christian missionaries. The following basic definition is proposed for teaching:

“Teaching is intervention by one person intended to cause or guide learning in another person.” (Hill 1990, 143)

The concept of ‘teaching’ is, however, less central here for several reasons. First, this study is more concerned with the learner’s perceptions of what they have learnt and how they have learnt it rather than what ‘teachers’ might intend. Second, following on from this learner-focus, this study recognises that learning happens more broadly than what teachers might intend or even recognise. Third, the range of ‘persons’ in view needs to be widened explicitly beyond formal teachers to include others such as mentors, other trainees, those outside the community, and importantly, God’s supernatural interventions in many and various ways.

The following definition of learning captures many of these aspects:

"Learning can be defined as the process of change in knowledge, beliefs, values, attitudes, feelings, skills, or behaviors as a result of experience with the natural or supernatural environment." (Pazmiño 2008, 226)

In terms of the goals of Christian education, Brian Hill summarises the aspiration of the Christian educator as to ‘teach for commitment’ (Hill 1985, 85–101).⁷ Such a statement anticipates a much wider expectation for education than merely the enhancement of knowledge or skills but extending into the whole of life. The literature review in this chapter presents a number of views which show that such whole of life issues are common concerns. The excursus at the end of this chapter presents a model of biblical maturity, to which it is proposed educational efforts might be directed 2.I, 60).

This chapter has eight sections and an excursus. The first four sections review areas of adult learning theory, establishing a model for three general domains or dimensions of learning, presenting examples of some university studies which measure analogous ‘graduate attributes’ and then exploring the role that learning communities might play. The fifth section surveys educational approaches relevant to the training of missionaries. The sixth section turns to organisation-specific material showing a heritage of awareness and intent to foster learning and growth in multiple areas. The seventh section summarises the theoretical framework important to this study and identifies the specific area of need for the focus of this research. The eighth section briefly outlines the researcher’s stance with respect to educational theories. Finally, an excursus outlines a framework with three dimensions of biblical maturity.

2.A Three Types of Learning and Knowing

This section reviews a range of theorists to support the general conception of a three-dimensional presentation of learning. It begins with the contribution of Jürgen Habermas and then considers insights of Jack Mezirow, Knud Illeris, and others in the area of Transformative Learning theory.

⁷ Hill makes the distinction “between head knowledge or belief *about*, and heart’s desire or belief *in*” and sees “commitment . . . [as] a *disposition* to act in accordance with one’s beliefs” (Hill 1985, 86 italics in original).

2.A.1 Jürgen Habermas

German philosopher Jürgen Habermas first proposed three areas of “knowledge and human interests” in a 1965 lecture (Habermas 1971, 301–17), “Three categories of processes of inquiry for which a specific connection between logical-methodological rules and knowledge-constitutive interests can be demonstrated.” He described the approaches and interests of these ‘sciences’ as follows:

The approach of the empirical-analytic sciences incorporates a *technical* cognitive interest; that of the historical-hermeneutic sciences incorporates a *practical* one; and the approach of the critically oriented sciences incorporates the *emancipatory* cognitive interest. (1971, 308)

He then explains his conception of each of these. First, he notes that the “empirical-analytic sciences” focus on observable events and co-variances, make predictive knowledge possible and thus “instrumental action” which he associates with “the cognitive interest in technical control over objectified processes” (1971, 308–9).

Habermas suggests that the second group, which he refers to as the “historical-hermeneutic sciences”, gain knowledge differently, “by the understanding of meaning, not observation.” He refers to the inter-subjectivity of meaning in this framework, “directed in its very structure toward the attainment of possible consensus amongst actors in the framework of a self-understanding derived from tradition,” and this he calls the “*practical* cognitive interest” (Habermas 1971, 309–10).

The third group Habermas identifies are the “*critical* social sciences,” which are distinguished by the fact that they go beyond the establishment of laws of knowledge and set off “a process of reflection in the consciousness.” Indeed the methodological framework for establishing validity in this category is the concept that “*self-reflection* is determined by an emancipatory cognitive interest” (Habermas 1971, 310).

These early insights have been influential in many areas and Gerry Ewert provides an excellent review on Habermas’ influence with particular regard to education. An adapted and expanded summary of the structure proposed by Habermas is given in table 2.1 (Ewert 1991, 347 and 361 combining tables 1 and 2).

Table 2.1. Summary of domains of knowledge and interests suggested by Habermas. Adapted from Ewert, 1991.

	Technical interests	Practical Interests	Emancipatory interests
Knowledge	Instrumental (causal explanation)	Practical (understanding)	Emancipation
Speech function	Representation of states of affairs	Establishment of interpersonal relations	Self-representation
Purpose	Objectivating (what can be done)	Norm-conformative (what might be done)	Expressive (what should be done)
Validity claims	Truth	Rightness	Truthfulness (sincerity)
Referent	Objective world	Social world	Subjective world
Interests	Need to control and manipulate the environment to meet basic needs	Mutual understanding of individual interests and needs and coordination of action	Self-knowledge through self-reflection. Autonomy.
Medium	Work	Language	Power
Science	Empirical-analytical or natural sciences	Hermeneutic or interpretive sciences	Critical sciences

Habermas was challenging scientific positivism and some disturbing implications of the kind of rationalism that characterised modernity. His mentors, Horkheimer and Adorno, had noted that a feature of modernity is that humans are treated as objects to be manipulated and dominated. Lasse Thomassen traced their line of argument as “modernity equals reason, reason equals instrumental reason, and instrumental reason equals manipulation and domination” (2010, 21). In response to their “brooding pessimism” (Gouthro 2006, 7), Habermas defended reason generally, presenting communicative reason as a second kind of reason which was free of the shadow of manipulative domination. Thomassen presents this argument:

At a basic level, Habermas differentiates between instrumental and communicative reason. Instrumental reason is modelled on a subject-object relation, and the aim is manipulation and domination of the object, whether the latter is nature or other human beings. Communicative reason is intersubjective. It aims at shared understanding and consensus on the basis of domination-free dialogue. That is, communicative reason is a matter of subject-subject relationships where one treats the other not merely as a means to an end, but as an end in itself, to paraphrase Kant. In communicative reason, there is thus an inbuilt ideal of freedom and equality, and this can form the basis of critique. (Thomassen 2010, 21–22)

Habermas realises that this type of reason may not be realized in practice but it must be presumed in order to free reason from always being seen as a form of domination (Thomassen 2010, 22–24), though as Ewert notes the ideal discourse or speech act can be approached when power relations remain unused (Ewert 1991, 361–62).

Kevin Vanhoozer identifies that the aim of ‘communicative acts’ is to produce understanding, whereas for ‘instrumental’ or ‘strategic’ action the goal is some other change in the world (VanHoozer 2001, 27). Patricia Gouthro also notes with respect to adult learners, “to attain communicative competency, individuals must become autonomous individuals, capable of reflection” (Gouthro 2006, 13).

These insights, of laying aside power and eschewing manipulation, bear upon the conditions which might be important to fostering knowing and learning. This is particularly true in the environment of a ‘learning community,’ which will be addressed later.

Aside from educational thinking, the observations about ‘modernity’ and the impacts of instrumental reason continue to resonate with criticisms of that cultural mindset of ‘the West’ which brain researcher Iain McGilchrist portrays under increasing domination by the left hemisphere’s take on the world: “a culture that is very good at using the world, as if it were just a heap of resource to further our plans” (Rowson and McGilchrist 2013, 20). This interjection of brain research suggests some bio-structural basis in differences in both personality and culture (Rowson and McGilchrist 2013, 13), however this is out of scope for this study. Similarly, Ruth Wall’s references to the neurobiological processes inherent in learning (Wall 2015,

38, 228–29), and Illeris’s noting the bio-structure of the brain in his theory of learning (Illeris 2007, 12–16), are also out of this study’s scope.⁸

Habermas’s impact in adult education continues as can be demonstrated by wide citation of his works and of those whom he has influenced, such as Jack Mezirow.

2.A.2 Jack Mezirow and Transformative Learning

Jack Mezirow and fellow educational researchers in the USA undertook a large study of older women returning to higher education which was designed to uncover factors relevant to their progress. The research resulted in a conceptualisation of a process of “perspective transformation” which eventually included 10 elements (1981, 65) by which he proposed that adults change their “meaning perspectives” (1981, 61, 72–29) and which has come to be known as the “transformative learning process” (Baumgartner 2012, 100–102).

The 10 elements from Mezirow consist of:

1. A disorienting dilemma
2. Self-examination with feelings of fear, anger, guilt, or shame
3. A critical assessment of assumptions
4. Recognition that one’s discontent and the process of transformation are shared
5. Exploration of options for new roles, relationships, and actions
6. Planning a course of action
7. Acquiring knowledge and skills for implementing one’s plans

⁸ This discussion has already been identified as out of scope but it has been noted by a reviewer that this ‘hemisphere’ stereotyping is not universally supported.

8. Provisional trying of new roles
9. Building competence and self-confidence in new roles and relationships
10. A reintegration into one's life on the basis of conditions dictated by one's new perspective (Mezirow 2012, 86)

Mezirow echoes Habermas' three domains⁹ and offers a similar critique. For example: "Educators have not only failed to recognize the crucial distinction among the three domains, but have assumed that the mode of inquiry derived from the empirical-analytic sciences is equally appropriate to all three learning domains" (Mezirow 1981, 75). Ewert notes that Mezirow "sees Habermas's paradigm of interests, knowledge, and science as definitive domains of adult learning with discrete learning goals, pedagogical methodologies, and learning needs" (Ewert 1991, 348).

The next section briefly considers theorists who have taken Mezirow's transformative learning theory and developed it in a wide variety of ways.

2.A.3 Further Development of Transformative Learning Theory

Patricia Cranton and Edward Taylor have been two key proponents of Transformative Learning and they again refer to three domains of learning. They note the continued trend away from "an emphasis on instrumental learning focusing on the acquisition of skills and knowledge and effective strategies for teaching adults to a perspective of learning that emphasized communicative and emancipatory learning" (E. W. Taylor and Cranton 2012, 333).

Sharan Merriam and SeonJoo Kim note the dominance of qualitative studies over quantitative approaches to the study of transformative learning. They present three

⁹ Mezirow's later formulation accepts Habermas's first two learning domains, instrumental and communicative, but the third, emancipation, he reinterprets as "the transformation process that pertains in both instrumental and communicative learning domains" (Mezirow 2012, 78). Mezirow also rejects another two domains, normative and impressionistic learning (Mezirow 2012, 78). He apparently finds these somewhere in Habermas but does not indicate a reference and this researcher was not able to determine the source.

factors which start to explain this: first, the epistemological perspective of the researcher, with most transformative learning theorists leaning away from the positivist framework criticised by Habermas; second and arising out of the first, the kinds of research questions commonly asked concern meaning and understanding; and third, their claim that the phenomenon is relatively immature (Merriam and Kim 2012, 56–57).¹⁰

Such arguments might explain some reticence towards quantitative scrutiny but they also suggest problems. One might ask why a theory that has been around for 30 years is considered so immature. A partial response is that transformative learning has indeed become something of a “floating signifier” with a wide range of meanings resisting tight definitions (Wall 2015, 43, citing Illeris 2014, 15), from individual-focused depth-psychology to critical theorists aiming at societal transformation (E. W. Taylor and Cranton 2012, 333–34). In addition, the philosophical roots in Habermas suggest a likely self-selection bias for those who reject the positivist approach and its closely associated quantification.

Michael Newman’s many criticisms of transformative learning might be summed up in his contention that generally the descriptions of transformative learning methods and results amount to “good teaching” and “good learning” and there is thus an earnestness about efforts to find what is specifically “transformative” which might push educators outside of appropriate ethical boundaries (Newman 2014). The potential for such ethical problems has been noted within transformative learning circles including: intentionally catalysing traumatic disorienting dilemmas, and, coercing students to take on a particularly critical stance towards the world in line with the educator’s beliefs (E. W. Taylor and Cranton 2012, 336).

Another line of critique of transformative learning theory questions Cranton and Taylor’s claim that the theory must be founded upon a set of humanistic assumptions (Cranton and Taylor 2012, 6). As Ruth Wall notes, those from a faith-based

¹⁰ The first two of these reasons might be taken by some to suggest that the nature of reality is not open to quantitative methods. This would seem to take Habermas’ critique of positivism too far. Rather, it seems that Habermas would admit a role for quantitative methods within the field of instrumental interests.

worldview would want to challenge such assumptions as the absence of absolute truth, a naturalistic worldview that excludes the supernatural, and absolute human agency (Wall 2015, 51–56). Whilst the humanistic assumptions and critical social theory goals appear to be a self-contained rationale for transformative learning, they suffer from the same bootstrapping problems which allegedly stymied Habermas, namely, that people are ignorant, society is manifestly broken, and neither individual nor society can rescue itself (Thomassen 2010, 28–29). Such observations call into question the assumptions about the good of humanity, freedom of choice, and how agreement on aims for societal change might be effected when reality is defined by each person individually.

On the other hand, it appears that much of transformative learning practice accords with a biblically endorsed approach to both individual transformation and societal change. The Bible portrays a desperately negative view of humanity separated from God (e.g. Ephesians 4:17-19; Romans 1:18-32; Titus 3:3) whilst offering both the resources and the encouragement towards the kinds of changes that transformative learning purports to effect (cf. Ephesians 4:20-24; Romans 12:2; and Titus 3:5 and contexts). From these and other passages it seems quite possible to construct an alternative foundation for transformative learning concepts from a biblical worldview, an exercise that lies outside the scope of this research.¹¹

2.A.4 Knud Illeris

Danish educator Knud Illeris also identified “three dimensions of any learning,” most recently labelling them “the cognitive, the emotional, and the social” (Illeris 2015, 46). In earlier formulations he discussed these dimensions using different terms: the “content dimension”, for which he uses the signal words “knowledge, understanding, and skills”; the “incentive dimension” using the words “motivation, emotion, and volition”; and, the “interaction dimension” denoting “action, communication, or cooperation” with others in the close social or general

¹¹ Although Transformative Learning Theory was explored in theoretical terms and appears to offer useful insights, it was not pursued past the first phase of focus group research, and further analysis seems unwarranted here.

environment. In creating this model he consciously avoids the more traditional division of cognitive, affective, and conative or volitional (Illeris 2007, 24–25).

Illeris then used and extended Piaget's ideas of ways of learning to develop four basic types of learning: cumulative, assimilative, accommodative, and transformative learning. He noted that he used the latter term for its popularity and linguistic connection to the other adjectives in the list (Illeris 2007, 47). This reticence over 'transformative learning theory' continues in his observation that it is used in so many ways and with so many different understandings (Illeris 2015, 46).

2.A.5 Summary of Three Types of Learning

This consideration of widely recognised and significant voices¹² has demonstrated a general agreement that learning might be usefully thought of in three dimensions, which are provisionally labelled here as instrumental, communicative, and reflective. We turn now to evidence supporting these dimensions from quantitative studies in the field of graduate attributes.

2.B Graduate Attribute Studies

This section surveys studies in the area of tertiary graduate attributes which enhance our understanding of further three-dimensional models of learning and suggest potential methods of quantitative analysis. This provides a transition to the particular importance of Learning Communities to the growth and learning in communicative and reflective dimensions.

¹² It has been noted that although there are some in the transformative learning field who explicitly write with a self-confessed spirituality, most of these authors write from a secular humanist perspective. Evidence is presented in later sections showing these three areas are concerns common to education and training from a Christian perspective. Furthermore, an excursus adds a possible biblical framework.

2.B.1 University Student Experience and Graduate Outcomes

Over the last two decades institutions of higher education have been pressured to consider it their responsibility to produce graduates who are not only equipped with discipline specific skills but also a range of more generic skills (Ewell and McCormick 2020, 1). These “graduate attributes” have been outlined in an Australian Higher Education Council report as:

The skills, personal attributes and values which should be acquired by all graduates regardless of their discipline or field of study. In other words, generic skills should represent the central achievements of higher education as a process. (Higher Education Council (Australia) 1992, 20, quoted in Bath et al. 2004, 313)

Debra Bath et al. go on to suggest that such “attributes or qualities include critical thinking, intellectual curiosity, problem-solving, logical and independent thought, communication and information management skills, intellectual rigour, creativity and imagination, ethical practice, integrity and tolerance” (2004, 313–14). Such lists include, in addition to the cognitive skills, interpersonal skills and areas of character formation. The rise of such concerns has been attributed to three factors: seeing education as a lifelong process; greater focus on employability; and the influence of the quality movement (Bath et al. 2004, 313–14; C. D. Smith and Bath 2006, 259).

Research in this area has included large-scale quantitative studies of university students and graduates both to measure these various generic skills and the factors that might promote their development. An Australian government report highlights the importance of social factors, noting that:

This research, much of which comes from the United States, establishes that positive outcomes for students depend on many factors besides classroom instruction—factors associated with the social experiences of students, their interactions with other students and staff, and the nature of the learning climate in the institution (McInnis et al. 2001).

The following provides more detail on the kinds of attributes that are valued, at least by governments¹³ and employers, and the ways in which such attributes have been found to result largely from community interactions within the universities.¹⁴

2.B.2 Calvin Smith and Debra Bath

Calvin Smith and Debra Bath studied the impact of learning communities on both academic discipline knowledge and generic graduate outcomes, which are described as “the skills, personal attributes and values which should be acquired by all graduates regardless of their discipline or field of study” (C. D. Smith and Bath 2006, 262). Their examination of the research at that time already showed “a foregrounding of student/student and student/teacher learning collaborations focused on a variety of engaging learning tasks and socially integrative learning environments” (C. D. Smith and Bath 2006, 263). They particularly noted that:

While most universities place emphasis on formal communication . . . these forms of communication are not necessarily the forms that will assist students in their social and academic interactions at university. . . . [Instead,] informal and formal learning communities are important in providing students with experiences that will help develop skills of listening, understanding and responding, speaking, participating in teams and taking leadership. (C. D. Smith and Bath 2006, 264)

They also considered questions of moral and ethical responsibilities which form part of the conception of desired generic graduate outcomes. These observations indicated to them that “generic skills tend to be best developed in contexts of high interaction, collaboration with peers and faculty, and engagement in a community of learning” (C. D. Smith and Bath 2006, 266). With this analysis, it is unsurprising to note that in a comparison study of desirable graduate competencies employers

¹³ Admittedly, governments with a predominantly Western background.

¹⁴ A more recent report on the Australian curriculum, notably for primary and secondary education rather than higher education, identifies five broad approaches to the purposes of education labelled respectively: utilitarian, 21st century learning, personalised learning, equity and social justice, and enculturation. The report notes that, whilst the first four of these are addressed in the curriculum, the last, enculturation, fails to adequately reflect elements of importance to the “moral, spiritual and aesthetic education of students” (Donnelly and Wiltshire 2014, 24, 27, 122)

tended to rate relational aspects as of higher importance than academics (Hambur et al. 2002)¹⁵.

Smith and Bath's research then examined responses to the University of Queensland Student Experience Survey (UQSES) and related three graduate outcome variables (discipline-specific knowledge and skills, communication and problem solving, and ethical and social sensitivity) to four independent variables (teaching quality, program quality, Learning Community, and Good Teaching). Overall they concluded that:

Measures of teaching and program quality do not account for as much of the variance in graduate outcomes, as often, as does the social, interactive, and collaborative character of the student experience of university life. For discipline knowledge and skills, teaching quality and learning community were the strongest predictors. . . . For communication and problem solving, the learning community was by far the strongest predictor, followed by teaching quality. For ethical and social sensitivity, learning community was also the strongest predictor. (C. D. Smith and Bath 2006)

The present researcher has drawn from the methodology used in Smith and Bath's study, including use, with minor adjustments, of the Learning Community Scale (LCS)¹⁶, part of the Course Experience Questionnaire (CEQ) originally developed by Craig McInnes et al. (McInnis et al. 2001).

2.B.3 Doris Leung and David Kember

Continuing the consideration of student experiences and graduate outcomes in tertiary institutions, a study by Doris Leung and David Kember surveyed first year university students (n=2019) in Hong Kong to determine, amongst other things, the impact of Learning Communities on a range of desired graduate attributes. They had

¹⁵ In particular, compare the various competencies as ranked by academics versus those competencies as ranked by employers in the list of Appendix 2.

¹⁶ This set of questions is termed 'Learning Community Shallow' in the survey analysis to distinguish them from another set of questions designed to explore deeper experience of Learning Communities. In passing, it is noted that this scale appears to draw on the characteristics of a 'sense of community' identified by David McMillan and David Chavis, namely: membership; influence; integration and fulfilment of needs; and shared emotional connection (McMillan and Chavis 1986, 9).

previously noted that students joined learning communities in two phases. In the first phase students joined broad groups by social assimilation, usually quickly and during the orientation period, and these were more social communities. In a second phase a more discipline-specific learning community would be joined over a longer period through induction programs within the departments and this was found to have more of an impact on their cognitive development.

Leung and Kember's research found that the learning community had a significant impact both on assimilation to university life and the adaptations in study behaviour necessary for progression in discipline-specific studies at university level.

Interestingly they also found that the "orientation and integration latent variable" did not have a significant correlation with the development of cognitive attributes but did have a significant though smaller correlation with the desired Values / Affective attributes (2013, 237).

Several features of this study are relevant to the present research including: the three-fold breakdown of the desired areas of growth; the role of the learning community and particularly the acknowledgement of the importance of student-student relationships in the model; and the survey and Structural Equation Modelling (SEM) techniques used.

2.B.4 David Kember et al.

The research by David Kember, Celina Hong, Vickie Yau, and Shun Amaly Ho continues this line of enquiry looking at the development of 'graduate attributes'. They divided 13 desirable graduate attributes amongst a similar set of three categories: cognitive, social, and affective.

Cognitive attributes were identified as higher-order intellectual capabilities. Social attributes related to the ability to communicate, work with or deal with others. Affective attributes were values or beliefs held by the individual, e.g., ethical values or global citizenship. (Kember et al. 2017, 802)

Kember et al. interviewed 90 students and coded the interviews amongst five different mechanisms of influence to determine those contributing the most to development in each of the specified graduate attributes. Their results identified that, for some, teaching and learning in the academic discipline itself had obvious links;

for example, being presented with multiple viewpoints on an issue contributed to the development in critical intellectual inquiry. However, they found that study of the discipline itself showed no significant link to “greater understanding of others,” which was developed more through “immersion in a rich campus environment” (Kember et al. 2017, 805). Similarly, ethical outlooks did not appear to be influenced by teaching and learning in the university, though could be influenced by direct connection with a member of the university community. They concluded that “the affective attributes are clearly those that are in most need of attention” (Kember et al. 2017, 813).

2.B.5 Summary of Graduate Attribute Studies

The university-based studies described above continue to refine our understanding of three-dimensional models of learning and the ways in which various independent factors might influence their development in the context of adult learning. It is relevant that these studies have been substantially quantitative, thus bringing empirical evidence to the initial theoretical discussion. Importantly for this study, they suggest that different types of engagement in learning communities might be important influences upon this wider learning and that these influences might be biased across the dimensions.

Focused consideration will now be given to such learning communities.

2.C Learning in Community

This section presents material relevant to the understanding of learning in communities and the importance of groups of people actively learning together for development in the three dimensions. Anecdotal reports, personal observations and discussions with teaching staff of the SAH training program indicate the development of what may be described as ‘learning communities’ and suggest it is an important area to explore. It begins by tracing some of the theoretical and historical antecedents before considering more recent commentators.

2.C.1 Lev Vygotsky

The modern conception of learning communities might be traced to the influence of Soviet social constructivist, Lev Vygotsky. Vygotsky's key insight sprang from the observation that children take a huge leap forward in many kinds of learning and problem-solving when they develop facility in language, using it both communicatively with others, but also ego-centrally, that is, talking to themselves as they work through problems (Vygotsky 1978, 25–27). He goes on to suggest that the use of 'sign', as a generalisation of language, becomes a precursor to internal learning. His theory then develops from that core the idea that learning effectively happens first in an external social setting ("interpsychological") before it is internalized ("intrapsychological"): "All the higher functions originate as actual relations between human individuals" (Vygotsky 1978, 57).

This idea that language facilitates an emergent property of a larger system in which an individual is an element, is philosophically important, particularly in the field of learning where it suggests that some things, and indeed perhaps indeed 'the higher functions', are best, or perhaps only, learnt in social settings. The present researcher reflects that meaning could be understood as constructed dynamically using language in community, inter-subjectively, and this contextual setting becomes important to the establishment of relationships in all their particularities and mutual influences.¹⁷

2.C.2 Victor Turner

Anthropologist Victor Turner studied rites of passage in various cultural contexts. He noted three phases: beginning with a ritual "separation" during which the individual detaches from the prior "state", followed by a "margin" or "liminal" period during which time their status is ambiguous, and culminating in a "reaggregation" in which the passage is consummated and the individual is brought back into wider society with a newly recognised status (Turner 1969, 94–95). To

¹⁷ This should not be read to exclude the possibility that God participates in this social network, conversing with the heart of an individual and, more widely, with a Christian community.

some extent all formal education puts students through this kind of rite of passage culminating in graduation. However Turner's description of such rites suggests not only an educational value but a more fundamentally structural role of education within society. In particular, the reaggregation phase installs an individual into a new state and "he is expected to behave in accordance with certain customary norms and ethical standards binding on incumbents of [such a social position]" (1969, 95).

2.C.3 Jean Lave and Etienne Wenger

From the late 1980s, Jean Lave and Etienne Wenger (later Wenger-Trayner) investigated what they perceived as an older stream of learning through apprenticeship models. Lave had been studying the ways in which apprentices advanced in Liberian tailor shops (Lave and Wenger 1991, chap. 3). They found that there was almost no formal instruction or 'schooling' from master to apprentice but that instead much of the learning is instead transferred amongst closely ranked apprentices (Wenger-Trayner and Wenger-Trayner 2015). Perhaps more importantly, they observed that learning was as much a social process, involving increasing participation in the community of tailors, as it was an internalisation of some reified body of knowledge (Lave and Wenger 1991, 47–51).

The concept that has taken traction from their work is *communities of practice*:

Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly. (Wenger-Trayner and Wenger-Trayner 2015, 1)

Wenger-Trayner and Wenger-Trayner identify three crucial characteristics: the domain of interest, including a commitment and competence shared by the members; the community, building relationships and interacting; and the practice, which develops practices and resources which become a "shared repertoire" (2015, 2). Importantly, membership entails more than the instrumental purpose of helping individual learners to internalize knowledge but seeing learning itself as "increasing participation in communities of practice" (Lave and Wenger 1991, 49).

Peter Senge's conception of a learning organisation is similar as members collaborate in joint tasks and master a common set of mental models and shared language. This discipline of participation promotes their functioning, not just in their

exclusive times together, but in their coordinated roles within the organization (Senge 1990).

Wenger develops these ideas further into a social learning theory and observes that learning in some way involves more than the absorbed content but aspects of identity and “social becoming” (Wenger 2010, 3). Rather than having a competence unconnected to the rest of life, “gaining a competence entails becoming someone for whom the competence is a meaningful way of living in the world” (2010, 3). Such living is explicitly as part of that social community, both with the recognised membership and the accountability and ethical responsibilities that attach (2010, 3).

2.C.4 Biblical Knowing

Such a view of the social aspects of learning and knowing might remind the reader of a more Hebraic understanding of ‘knowing’ with the wider semantic range of ‘yada’ [יָדָע] for which ‘to know’ is not merely “to be intellectually informed about some abstract principle, but to apprehend and experience reality” (Schultz 1996). Such a view of knowing also implies entering into the relationships and responsibilities implied by that knowledge. For example, the term is used specifically in relation to treaties where “to know is to acknowledge” and such knowledge and ‘ac-knowledgement’ (researcher’s emphasis) implies loyalty not merely as intellectual understanding or even promise but as action faithful to that covenant or treaty (1996). The gaining of wisdom is associated with an ethical imperative over its use towards others, for example in Proverbs 24, not to plan evil (Proverbs 24:8-9) but to deliver others from death (Proverbs 24:11-12).

This is also a New Testament concern as is found in Paul’s instructions. He charges Timothy: “Do your best to present yourself to God as one approved, a worker who does not need to be ashamed and who correctly handles the word of truth” (2 Timothy 2:15 NIV).

The growing understanding of these ethical imperatives attaching to knowledge reinforce the impetus behind the previously mentioned studies of graduate

attributes.¹⁸ These studies spring from the policies of governments and the desires of businesses attempting to re-invigorate the ethics and the practice of the relevant professions.

2.C.5 Dietrich Bonhoeffer

Communities of Learning in one form or another have a very long history. The monastic communities as centres of learning might be understood at least partially in this way. Bonhoeffer's short work *Life Together*, written in 1938 (Bonhoeffer 1954, 11), has many insights into the idea of community and, whilst not specifically a 'learning community' as they have come to be known, still describes a community that learns. Almost as an aside he identifies the value of both fellowship and disillusionment, truths that we learn in the experience of community and perhaps only from the experience of community:

Just as surely as God desires to lead us to a knowledge of genuine Christian fellowship, so surely must we be overwhelmed by a great disillusionment with others, with Christians in general, and, if we are fortunate, with ourselves. (Bonhoeffer 1954, 26–27)

Thus Bonhoeffer hinted at some of the ways that learning communities achieve their function: not just in the cognitive areas of traditional instrumental knowledge but also in those other areas of communicative and even reflective learning leading to better understanding of others and ourselves.

2.C.6 James Samra

In the field of New Testament studies James Samra points out that Paul's central concern to bring believers to maturity in conformity to the image of Christ is

¹⁸ The discussion in preceding sections has noted how various authors recognise the ethical implications of knowledge. These authors are not known to have come with an explicitly Christian nor even a theistic perspective. Those coming with an explicitly Christian point of view would ultimately ground such ethics, not just in the possession of knowledge but, in the expectations of mutual faithfulness arising from God's personal relationship with his people. In this view, knowledge arises from revelation within relationship and failure to act on revealed knowledge has both judicial and relational consequences (e.g. Matthew 7:15-27).

facilitated by the local community of believers, indeed “the local church is central to the facilitation of this process” (Samra 2006, 170). “For Paul, the church is the place where and the means by which believers identify with Christ, endure suffering, experience the presence of God, receive and live out wisdom from God, and imitate godly examples” (2006, 169).

2.C.7 Claire Smith

Also in New Testament studies, Claire Smith, considering Pauline *scholastic communities*, notes that “modern notions of education are different from those in antiquity” (C. S. Smith 2012, 49:44). With particular relevance to this current study, she cautions that “care must be taken to observe and understand the relational and volitional aspects of teaching and learning in the NT” (2012, 49:44). Smith’s study of “scholastic communities” through the lens of four New Testament letters uses a core assumption that “the activity of ‘teaching’ might reasonably be considered an essential activity in a ‘scholastic community,’ and that the scholastic nature of the early Christian communities represented in the four texts might be explored through the vocabulary of ‘teaching’” (2012, 49:30).¹⁹

The methodology of examining teaching vocabulary might be largely valid for the purpose of Smith’s study, but the examples of apprenticeship at the root of Lave’s study, specifically portrayed as an older model of learning and apparently without formal teaching, suggest that an exclusive focus on the vocabulary of ‘teaching’ might underestimate important areas of ‘learning,’ particularly in those very areas of relational and volitional learning where the hidden curriculum is more operative. For example, Sylvia Collinson highlights “the informal dimension of discipling”

¹⁹ The researcher is, for convenience, adopting Smith’s working definition of teaching, “to impart a message from an addresser to an addressee, where the purpose and/or result of the act is to cause the addressee to gain knowledge, understanding, a skill, attitude or belief or to transform thought, belief or conduct” (2012, 49:378). One might describe as “formal” most of the activities in her nine semantic groupings: “‘core-teaching’, ‘speaking’, ‘traditioning’, ‘announcing’, ‘revealing’, ‘worshipping’, ‘commanding’, ‘correcting’, and ‘remembering’” (2012, 49:382). Smith is aware of the more “informal” aspects of community but the emphasis of her study is naturally upon the explicit vocabulary which is clear evidence that the communities were learning predominantly through these “formal” aspects of teaching.

(Collinson 2000, 13–16). If one were to re-read Acts and the letters of Paul attentive to non-formal methods, one would note features of those apprenticeship models in Paul and his companions. The pastoral epistles are further semi-formal instructions to graduates of his discipleship school, Timothy and Titus. Paul also refers to unwritten messages entrusted personally via Tychicus and Onesimus in the final greetings of Colossians, strongly suggesting that Paul used non-formal methods at times (Colossians 4:7-9).

2.C.8 Parker Palmer

Parker Palmer has written on the subject of teaching from his background as a sociologist and educator but also with a clear faith basis as a Quaker. His works emphasise some of the ways that he believes education becomes communal and that it is clearly not just the relationship that the teacher has with each student but the relationships of trust that develop between students:

Good teachers also bring students into community with themselves and with each other - not simply for the sake of warm feelings, but to do the difficult things that teaching and learning require. The debate over educational reform has often been polarized between the apostles of the 'hard' intellectual virtues and the disciples of the 'soft' emotional virtues. It has been a fruitless debate because it has missed a simple point: the practice of intellectual rigor in the classroom requires an ethos of trust and acceptance. Intellectual rigor depends on things like honest dissent and the willingness to change our minds, things that will not happen if the 'soft' values of community are lacking. In the absence of the communal virtues, intellectual rigor too easily turns into intellectual *rigor mortis*. (P. J. Palmer 1993, xvii)

Palmer also notes the ways in which monastic traditions have informed his model and his understanding of spiritual disciplines as “the study of sacred texts, the practice of prayer and contemplation, and the gathered life of the community itself” (1993, 17–18). These three ‘spiritual disciplines’ again parallel the three learning dimensions (instrumental, reflective, and communicative) which we have been

considering in this review and the gathered life of community of course also embodies a form of learning in community.²⁰

Discussing the ‘hidden curriculum’ of objectivism, Palmer highlights the correspondence between an objective view of knowledge and the assessment that at heart it fosters isolation where students gather “as a mere pedagogical convenience” He writes: “In objectivism there is no rationale for community, no imperative for a mutual, interactive question to know and be known” (1993, 36–37). Thus objectivism’s neglect of community actually drives it away and tends to the error identified by the earlier authors, namely that “we become manipulators of each other and the world rather than mutually responsible participants and co-creators” (P. J. Palmer 1993, 37).

Palmer’s criticism of objectivism does not, however, end in a subjectivism where truth is individual. He maintains a standard of truth but points out, as we have noted above, that knowing truth entails a response, that is, to acknowledge and ‘obey’ it, something that is also done in community, and that “both our spiritual and our secular traditions affirm that truth will set us free, that only in obedience to truth can freedom be found” (P. J. Palmer 1993, 65).

This obligation to the truth seems a more fitting way of talking about this third dimension than the language of ‘emancipation’ used by Paolo Freire (2000) and Habermas as discussed above, for they attach an ‘ought’ of social change. Here too an ethical dilemma faces “practitioners of transformative learning theory [who] have a predisposition to educate for change:” recognising the inherent power imbalance as the educator and the often highly emotional context, and rightly discerning the “boundaries of appropriate pedagogical practice” in pushing students to engage with material so that they feel the responsibility to act, whether that be for personal or societal change, (Ettling 2012, 536).

²⁰ This allocation of the three disciplines is a simplification, taking the face-value predominant activity as the main focus. The ‘study of sacred texts’ done ‘in good faith’ should always lead not just to knowledge, but also to deeper relationship with God and edification of the body of believers. However, this is not a logical necessity and the texts could be studied without such attendant effects.

Such dilemmas are, of course, also present within faith communities. The role of a spiritual director, focused in this reflective space of character and spirit, requires the discernment to limit their input ensuring that the ‘direction’ is “directing our attention to the presence of God in our lives,” and at times restraining comments trusting “God to do God’s work in God’s time” (G. T. Smith 2014, 11, 47).

2.C.9 Gary Piercy

Gary Piercy, writing as a theological lecturer and pastor, argues that the drive to meaning is a strong motivation for adult learners. In this context, not only is spirituality enjoying a resurgence of interest in general adult education, but that it enhances it, as the “recognition that they are a part of something greater than themselves provides adult learners a tremendous opportunity for further spiritual development as they engage in meaning making” (Piercy 2013, 36). Assuming a transformative learning framework, he goes on to suggest strategies which will enhance spirituality in education: use of imagination; journaling and narrative; creating a safe learning environment, that is, “a climate of mutual respect that encourages divergent dialogue”; learning covenants; ensuring mutual support; mentoring; self-directed learning; and informal dialogue between instructor and student (2013, 38–39).

2.C.10 Summary of Learning in Community

This section has considered the ways in which social settings are important for learning and the idea that the development of higher functions might even require social settings. Various communal learning settings were identified and it was noted that not all learning situations might be recognised as formal teaching. It was also noted that gathering in community extends beyond facilitating the mastery of objective content, for there is often a stated or unstated obligation both to the truth of that new understanding and the community that holds the relevant practice. Teaching at its best creates communities which are safe enough to foster true intellectual

rigour and the human drive towards meaning, connectedness, and thus the spiritual aspects of learning.²¹

2.D Self-Determination and Relational Models Theories

This section briefly surveys two theories which inform the core flow of this examination. The first, self-determination theory, provides further support from the field of psychology for the three-fold learning dimensions. The second, relational models theory, potentially provides grid for an analysis of relationships in a learning community.

2.D.1 Self-Determination Theory

The work of psychologists Richard Ryan and Edward Deci provides further illumination into the aspects of communities that enhance learning. In their Self-Determination Theory (SDT), Ryan and Deci posit that there are three basic psychological needs: Competence; Relatedness; and Autonomy (Ryan and Deci 2000, 68). They argue that providing an environment in which these three needs are met helps to facilitate many other outcomes. Of relevance here are the ways in which a learning community might be arranged to meet these needs, in particular integrating trainees so that they feel “belongingness and connectedness with others” (2000, 73). They also note that “contexts supportive of autonomy, competence, and relatedness were found to foster greater internalization and integration than contexts that thwart satisfaction of these needs” (2000, 76).

The conception of these three psychological ‘needs’ aligns well with the three domains of human interest identified by Habermas and with the conception of three dimensions proposed in this research. In such a mapping, competence would be associated with instrumental learning, relatedness with communicative learning, and autonomy with the emancipatory or reflective learning. Importantly, however, Ryan

²¹ It is noted that many other educators have written on adult education, including learning in community, and several have been mentioned above: Jack Mezirow (2.A.2, 14) as well as Edward Taylor and Patricia Cranton (2.A.3, 15).

and Deci “do not equate autonomy with independence or individualism” but rather with “the feeling of volition” (2000, 74), and this seems to accord with the concepts inherent in spiritual and character formation, that is, the appropriate exercise of volition.

In the present research, the conception of reflective learning as ‘spiritual and character formation’ is a moderated form of the *prima facie* concept of ‘autonomy.’ Further to Ryan and Deci’s caveat above, autonomy in common usage connotes both agency and independence and this risks misleading. In the biblical worldview, archetypally portrayed in Genesis chapter 3, agency is assumed but it is never independent of divine authority. Agency and independence are thus balanced in the expectation of accountability and the solemn pronouncement of punishment. Further, Paul’s arguments for mutual submission, for example in 1 Corinthians chapter 8, highlight that an individual’s agency or liberty (ἐξουσία, literally, ‘authority’) is also tied to a concern for ‘the weak ones’ (ἀσθενέσιν, literally, ‘without strength’) (1 Corinthians 8:9)²². A human claim to absolute independent agency almost constitutes the definition of sin. Thus Ryan and Deci’s concept of autonomy needs some adaptation for this research to recognise this moral agency.

Bringing together these communal conceptions of learning with the studies of graduate attributes, Martine Beachboard et al. applied SDT to Learning Communities in a context of higher education in the USA. They used National Survey of Student Engagement (NSSE) responses to ask whether participation in formally constructed cohorts and perceptions of relatedness improved two variables: academic development, and job preparation. “Relatedness” was conceptualised as the “belongingness and connectedness” identified by Ryan and Deci above (Beachboard et al. 2011, 856, 859–60). Similarly, “academic development” was conceived as “ability to read, write, think critically, and learn independently” (2011, 859–60). Finally, “job preparation” was conceived as “extent to which student is prepared to enter professional employment” included a mixture of knowledge, social skills, and

²² Paul’s appeal here appears to rest on understanding the general obligation of patron-client relationships where power comes with responsibility.

problem-solving, measured by “job-related knowledge and skills”, “working effectively with others”, and “solving of complex real-world problems” (2011, 859–60). Beachboard et al. found that raw cohort participation had minimal impact on either dependent variable. However, they found a significant mediating effect from their constructed measure of “relatedness”, particularly on “job preparation” (2011, 867).

Thus, putting students together in cohorts appears to have little impact in and of itself if they do not develop a sense of relatedness. So it is important to realise that a learning community is not automatically created when students are grouped together, even when their individually expressed purposes might be to learn. Similarly, a community of practice is not automatically created when people are brought together in a business unit, even when those workers each individually desire to enhance their practice. Both of these kinds of groups need to establish that sense of community which makes it a thing in and of itself. Such relatedness might even be considered an emergent property of such community.

In passing it is noted that in any group of Christians several factors predispose members to such feelings of belongingness: the biblical emphasis on being the covenant people of God, whether as Israel in the Old Testament or disciples of Christ in the New Testament; repeated exhortations in the New Testament to behave in loving ways to each other; and the result of the spiritual reality of divine presence promised by Jesus (Matthew 18:20).²³

2.D.2 Relational Models Theory

In a study on relationships within a learning community it helps to have an analytical framework. One approach is to use the four modes of relationships identified by

²³As an aside in his treatment of the social network of the fifth century theologian, Theodoret, Adam Schor points out: “God can be treated as part of a perceptual or representational network. Cognitive research has bound religious experience to the same neural systems that manage social interactions . . . Humans perceive relationships not just with acquaintances, but also with unseen forces” (Schor 2011, 184).

Alan Fiske in Relational Models Theory (RMT) (Fiske 1992). As Fiske introduced his theory, he noted that:

The prevailing assumption in Western psychology has been that humans are by nature asocial individualists. Psychologists (and most other social scientists) usually explain social relationships as instrumental means to extrinsic, non-social ends, or as constraints on the satisfaction of individual desires. Consequently, the individual and the situation have long been the unit of analysis in social psychology. (1992, 689)

Fiske then presents an alternative paradigm in which he argues “that people are fundamentally sociable—that they generally organize their social life in terms of their relations with other people” (1992, 689). His major claim in RMT is “that people in all cultures use just four relational models to generate most kinds of social interaction, evaluation and affect” (1992, 689). The four types of relationships are described as follows:

[Firstly,] Communal Sharing (CS) relationships are based on a conception of some bonded group of people as equivalent and undifferentiated . . . focusing on commonalities and disregarding distinct individual identities . . . [They might share] blood [and] it is natural to be relatively kind and altruistic . . . [Secondly,] Authority Ranking (AR) relationships are based on a model of asymmetry among people who are linearly ordered along some hierarchical social dimension . . . people higher in rank have prestige, prerogatives, and privileges . . . but subordinates are often entitled to protection and pastoral care . . . [Thirdly,] Equality Matching (EM) relationships are based on a model of even balance and one-for one correspondence . . . [in which] each person is entitled to the same amount as each other person in the relationship and . . . the direction and magnitude of an imbalance are meaningful . . . [Finally,] Market Pricing (MP) relationships are based on a model of proportionality in social relationships; people attend to ratios and rates. People in an MP relationship usually reduce all the relevant features and components under consideration to a single value or utility metric that allows the comparison of many qualitatively and quantitatively diverse factors . . . [and tend to think in terms of] cost-benefits and *rational* calculations of efficiency or expected utility. (1992, 690–92 italics as in original)

Alongside these basic four models, Fiske notes two residual cases, mainly of academic interest: “*asocial* interactions, in which people use other people purely as a means to some ulterior end, [and] *null* interactions, in which people ignore each other’s conceptions, goals, and standards entirely” (Fiske 1992, 692). The asocial might be the extreme end of instrumental manipulation of others that has been noted in the discussion so far. The null cases are effectively the absence of meaningful

relation, which applies to each of us with most people with whom we are not in proximity.²⁴

Fiske notes that the way people construct their social relations is by combining these elements (1992, 690). So one would not expect the relationship between two people to be exclusively CS or AR; it might manifest different modes in different situations. Nonetheless there are relationships in which one or another mode might be dominant and the others will nest hierarchically inside that. Intriguingly, Fiske notes correspondences between these four basic types of relationships and ways of thinking about data: CS as categorical; AR as ordinal; EM as interval; and MP as ratio (1992, 692). He also identifies that there might be an ordering of complexity from CS→AR→EM→MP (1992, 712).

Turning specifically to learning communities and communities of practice, we can see ways in which the balance of modes of relationship might enhance or detract from learning. Steffan Giessner and Niels van Quaquebeke have used RMT to understand perceptions of ethical and unethical leadership with the latter often found to represent a discrepancy between the perceptions of leaders and followers about the type of relationship model which should be in operation. They conclude “the perceiver’s salient RM [Relational Model] dictates a set of normatively appropriate behaviors against which behavior is judged as ethical or unethical and each of the four RM’s dictates a distinct set of moral norms” (Giessner and van Quaquebeke 2010). Such insights have relevance to the kinds of relationships and conflicts that arise within all communities including, in the context of this study, learning communities.

Other research in RMT with overlaps to the current study is of interest but considered out of scope. That research includes: cross-cultural individualism and collectivism (Koerner and Fujiwara 2000); psychometric testing of personality

²⁴ In considering the later research in relation to these other two modes, whilst theoretically it might be possible that ‘asocial’ relationships exist in a cohort, given the nature of the training and candidate selection processes this is very unlikely. At a formal level this study also assumes that relationships between members of different cohorts are ‘null’ though it is reasonably likely that trainees would know at least one other former trainee.

dimensions (OCEAN) (Caralis and Haslam 2004); educational applications in secondary schools (Bagley 2010); cultural orientations and personal values (Dalğar 2012); cultural differences in management (Hartl 2012; Woodhull 2006); and the use of the RMT categories in applications of formal social network analysis (Favre and Sornette 2015).

2.D.3 Summary of Self-Determination Theory and Relational Model Theory

Two additional theories have been briefly considered in order to understand the conditions that might be important in the formation of learning communities. Self-Determination Theory suggests how the fulfilment of three psychological needs contributes to motivation and the importance of not just being in the same cohort but of forming relationships with other members. Relational Models Theory provides further insight and a potential analytical frame for the ways in which the type of relationships operating within the community might enhance or detract from the goals of that community, specifically here in terms of learning communities and to a lesser extent, communities of practice.²⁵

2.E The Training of Cross-cultural Mission workers

This section briefly surveys representative publications from the last three decades which have address various aspects of the missionary experience with relevance to the training of missionaries, including selection, retention, relationships, and conflict. Sources that focus on missionary training highlight the importance of spiritual maturity and interpersonal skills, promoting an integrated approach to whole person training. One study describes transformative learning theory that can usefully inform whole-person missionary training. The discussion here concentrates

²⁵ The researcher is not aware of any research specifically relating RMT to Christian communities. One of the reviewers has recommended several more general works understood to address communal aspects of transformation, which are noted here for the reader (Pettit 2008; Brueggemann and Erickson 2015; Hanson 1986; Greenman and Kalantzis 2010).

on the received wisdom that training in residential community is of great benefit and how relationships amongst the cohort might be important.

2.E.1 Tuning God's Instruments (1990)

Denis Lane wrote a training manual to assist Asian churches and others in the “Two-Thirds World”²⁶ with some practical advice on how to set up work in missions. He offered advice on a variety of topics including the kinds of people to look for as candidates. Within this there are a few paragraphs on the importance of being able to work in a team and with different people. Lane recognised that some people cause problems through their relationships but his advice relates more to the selection processes rather than subsequent training which might go towards minimising such problems (Lane 1990).

2.E.2 Internationalizing Missionary Training (1991)

Internationalizing Missionary Training edited by William Taylor gives more insight into contemporary exemplars from around the world. Amongst them, All Nations Christian College is notable, being a residential training course. Taylor highlights the importance of the communal aspects: “The life in community is crucial; many training schools expect their staff to live on campus and provide housing for them. The centre becomes a magnificent learning community with both tensions and blessings” (William David Taylor 1991).

2.E.3 Establishing Ministry Training (1995)

Stephen Hoke writes about the value of a learning community very briefly under the statement “learning proceeds best in community.” He suggests that “learning is not primarily an individual endeavour [but requires] life-on-life exposure in familiar

²⁶ Used by original author.

non-threatening surroundings” with the ideal setting being “a family environment-a learning community” (Hoke 1995, 88). He continues:

A learning community provides for loving acceptance and trust of each member, nurtures the growth and development process, and creates frequent natural settings in which people can share needs, reflect on their experiences, talk about what they are discovering, and be vulnerable in admitting what is difficult to apply to themselves and change about themselves. (1995, 88)

Hoke’s brief treatment correctly identifies the value of a learning community.

However it would be naïve to conclude that this effect applies equally across all kinds of learning without differentiation. Given the preceding discussions, it would be appropriate to question such an assumption.

2.E.4 Preparing to Serve (1995)

David Harley is more explicit as he recognizes the priority of many institutions in “training the whole person” (C. D. Harley 1995, 79). His survey of missionary training centres in the “Two-Thirds World” found that overall their leaders ranked various aspects in this order of priority: Developing spiritual character; Learning to live with others in community; Developing a personal perspective on mission; Learning how to evangelise cross-culturally; Developing ministry effectiveness; and Other (1995, 79). The first two of these align with the dimensions being proposed in this research, reflective learning and communicative learning, whilst those later in the list might be regarded as instrumental or combinations of instrumental with communicative learning. As noted earlier in Taylor, Harley also recommends that missionary training be set up as a residential rather than a non-residential program (1995, 124).²⁷

²⁷ In a more recent article Harley chooses to present ten areas of critical preparation (D. Harley 2010). He also highlights continuing development suggesting that “Denominations and mission agencies need to put in place comprehensive programmes of member development, so that throughout their period of service, each person is encouraged to grow in faith, in character, in knowledge and in ministerial competence” (2010, 1).

2.E.5 Too Valuable to Lose (1997)

In the early 1990s the Mission Commission of the WEA researched the causes of missionary attrition, perceived to be a real problem. William Taylor's introductory article sets out a major issue discovered during the research, suggesting:

Perhaps a better way to state the case for training is to address the top five causes of OSC [Older Sending Country] 'preventable' attrition and realise that these causes have to do primarily with issues of character and relationships . . . formal theological institutions that say they train missionaries often address primarily knowledge components, not character nor even skills needed to survive and thrive in cross-cultural missions. (W. Taylor 1997, 13)

In the same volume Bruce Dipple raises the possibility that "conflict with peers could be related to inadequate selection process or inadequate field supervision, as much as to inadequate pre-field training" (Dipple 1997, 217). The research showed that for 8.5% of those who left the field the cause was attributed to "relationship problems with field leaders and missionaries" (1997, 218). He noted the need for both spiritual formation and interpersonal formation, and that the latter should specifically include conflict resolution skills in the formal program (1997, 218–21).

Kath Donovan and Ruth Myers wrote about differences between generationally distinct groups, identified by Tom Sine as "boosters (born between 1927 and 1945), the baby boomers (born between 1946 and 1964), and the busters (born between 1965 and 1983)" (Donovan and Myers 1997, 42). This potential for such intergenerational conflict suggests a potential line of enquiry in the current study.

2.E.6 Integral Missionary Training (2006)

Almost a decade after the WEA Mission Commission study, Robert Brynjolfson and Jonathan Lewis summarised an essentially three-fold characterisation of problem domains as follows:

When we collapsed the major causes of attrition of missionaries in our 14-nation study, we realized the clusters of problems with inadequate spirituality and character formation, weaknesses in relationality and community, and the absence of instrumental knowledge and skills for the tasks before us in missions. (Brynjolfson and Lewis 2006, ix)

They endorsed the value of learning in community whilst trying to find a place for educational options over the internet. They also implied that training in mission justifiably extends beyond instrumental learning into areas of character and relationship in an integrated way:

We share the deep commitment that the best equipping for ministry is done in community, and this has radical implications. What do we do with the rightful place of the exploding educational options through the Internet? . . . How can we presume to offer a master's in mission when our students have not been in any kind of accountable community that is integral to their training? (2006, x)

Brynjolfson later outlines their training approach:

Integral training addresses the needs of the whole person, including their character and spiritual formation, skill development, and their understanding. We can use the symbols heart, head, and hands to represent these three interrelated aspects [of] training. (2006, 5–6)

At first glance this appears to be focused on the individual, but in fact their description of the skill development component, i.e. hands, makes it clear that they are focusing on the relational aspects (2006, 29). Thus their approach is further support for a three-dimensional understanding of training.

In the same volume, Evelyn Hibbert, drawing on adult educator Malcolm Knowles, notes characteristics of adult learners and their needs: to have justification for why something should be learnt; to be respected for their ability to be self-directive; to incorporate their previous life experience; and, to have learning address current needs (E. Hibbert 2006, 55–57). She recommends that educators should focus on the learners, empowering them, and developing a positive learning context, acknowledging that “learning is a social process” (2006, 54–55).

2.E.7 *Worth Keeping* (ReMAP II, 2006)

A second major study of missionary attrition was published in 2006 (Hay et al. 2006). This study identifies similar factors to the 1997 study with the major factors that mission leaders of older sending countries (OSC) believed would be most effective in further reducing missionary attrition being: a clear sense of God's calling; supportive family; good relationships with co-missionaries; ability to adapt

to different cultures and learn new language; and maintaining a healthy personal spiritual life (Bloecher 2006, 16). The issues of relationships and spiritual life area are also emphasised here and later in the report: “The main problem that people encounter on the mission field is their colleagues. Working in cross-cultural teams is, according to mission agencies, the number one contemporary challenge” (Hay et al. 2006, 118, 143–52).

The report of Hay et al. notes the importance not just of Bible school training but of specialised missiological training: “It is obvious that agencies with low attrition have higher requirements regarding missiological training” by and large formal academic degrees in missiology (Bloecher 2006, 19, 21). The research team further finds that “formal academic missiological training proved to be much more effective preparation (correlated with retention) than Bible school training” (Hay et al. 2006, 117), whilst also wondering whether the opportunity for reflection afforded by higher degrees might be behind the higher retention of those with more academic training in general (2006, 117). The benefits of ongoing training whilst on the field are supported with the research showing a strong correlation with retention (2006, 118, 315–24).

2.E.8 “Nurturing Missionary Learning Communities” (2014)

Richard and Evelyn Hibbert have further developed the importance of on-the-job training for missionaries which continues past any pre-field training and initial orientation. They argue convincingly for “learning communities that connect experienced and novice missionaries and help them connect practice with theory” (R. Y. Hibbert and Hibbert 2014). Their stated aim is to create reflective practitioners in what they later re-label as ‘Communities of Practice.’ They list seven advantages of this kind of learning:

First . . . it is focussed practice, putting improved practice at the centre of its concern. . . . Second . . . it is holistic . . . [in that] the process of engaging in learning as a group helps to overcome a tendency to perceive learning as primarily intellectual because not only cognitive abilities but character qualities and social skills are needed for this kind of learning. . . . Third . . . it encourages experimentation. . . . Fourthly . . . [the learning] is a social process that benefits not just the individual but a whole group of people. . . . Fifth . . . this kind of learning . . . is contextualised. . . . Sixth, this kind of

learning is highly accessible . . . [and can] incorporate learners from all stages of practice. . . . Seventh . . . [such groups] foster a habit of lifelong learning. (2014, 8–10)

They also see a role for theorists in the field, missiologists, to engage with such communities of practice. To enable this they suggest four steps:

[First] recognize the need for more integrated missiological education; . . . [Second] model reflective practice in class; . . . [Third] become a resource person for field-based communities of practice; . . . [Fourth] start a missions learning community . . . [with those working in a local] culturally diverse community (2014, 13–15).

The Hibberts' more recent book, *Training Missionaries: Principles and Possibilities*, is a very practical resource for institutions wanting to set up a training program.

They provide a well-worked out rationale and a draft curriculum for a different type of training program. In terms of relevance to this research, they stress the importance of the relational nature of ministry (E. Hibbert and Hibbert 2016, 73–86). They also press the importance of “focusing on character and interpersonal skills” (2016, 94–95), and provide advice on creating a positive and communal learning environment, also drawing upon theorists noted above: Mezirow, Palmer, and Wenger and Lave (2016, 124–29).

2.E.9 “Preparing Adults for Crossing Cultures” (2015)

Ruth Wall's research²⁸ evaluates the ten-week En Route training course at All Nations Christian College in the UK. She concentrates on the ways that the institution promotes transformative learning and the extent to which students perceived their learning there to be personally transformative. She had approached her study with a model of learning involving three areas from Benjamin Bloom, namely, cognitive, affective, and psychomotor, variously summarised as “head-heart-hands” (Wall 2015, 16) or “heart, hands and head” (Brynjolfson and Lewis

²⁸ The context of Wall's study and the one reported in this research are similar. However, Wall writes as an educationalist embedded within the context of her own study and the focus is on developing her own practice. This researcher's stance is one step removed from the educational context being studied. Whilst within the same organisation as SAH, the present researcher has not had a direct impact on the educational content or delivery nor been a member of any training cohort.

2006). However, through the study she came to the conclusion that the “head and hands are both cognitive processes so a head-heart-hands approach may privilege cognitive over social aspects” (2015, 170). Her findings led her to reconceptualise holistic learning as involving dimensions of “cognitive/knowing, emotional/feeling and social/relating” (2015, 189). As noted above, Brynjolfson and Lewis’ explanation of the ‘hands’ indeed concentrates on the social/relating element however Wall is correct in that the immediate impression is of the learning of another skill in isolation, and her reconceptualization is more in line with the intersubjective meaning being drawn in this study.

Wall develops a “Transformative Learning Triangle (L^3)” (2015, 187–90) which aims to highlight institutional points of leverage rather than seeking to identify areas of learning. Thus she sees that learning can be enhanced by attention to the three corners labelled as: “learning concepts”, examining the assumptions around learning and the design of courses; “learning community”, actively promoting the relational environment that will allow learning with and from others; and “learning potential”, considering the ways in which the capacities of both tutors and of students might be developed (2015, 187–90). Wall is clearly enthusiastic about transformative learning but, as noted earlier, also challenges the underlying humanistic assumptions (2015, 51–56).

2.E.10 Relational Missionary Training (2017)

Enoch Wan and Mark Hedinger reinforce the importance of relationships in the training of missionaries given the importance of relationships in cross-cultural work. They base their work around a theory of “the paradigm of relational realism”, defining it as “the systematic understanding that reality is principally based on the ‘vertical relationship’ between God and the created order and secondarily ‘horizontal relationship’ within the created order” (Wan and Hedinger 2017, 17). They expand this theoretical model, based upon their reading of Scripture and outline what they see as “seven relationships that are key to intercultural Christian ministry” (2017, 38), between:

1. Members of the Trinity

2. God and the gospel messenger (vertical)
3. God and the audience (vertical)
4. The messenger and the audience (horizontal)
5. The gospel messenger and the culture from which he/she comes (horizontal)
6. The audience and the culture from which he/she comes (horizontal);
7. Demonic interaction with all other relationships. (2017, 40)

There is much of value in this taxonomy but there are also a few worrying gaps. Wan and Hedinger acknowledge the role of the faith community, both in transformative education (2017, 117) and in conveying the message (2017, 118), and they claim their “relational paradigm . . . is unique . . . [in part because it is] not individualistic; but collective . . . [and] not personally private; but transparent and community-based and interdependent” (2017, 123). So it is surprising that their seven basic relationships are written with ‘messenger’ in the singular. Similarly, given that relationship conflict between ‘messengers’ has been documented as a major cause of attrition, as noted above, it is concerning that their recommendations rarely address this area of training.

When Wan and Hedinger talk awkwardly about learning in community, they draw a hub and spokes picture between trainer and trainees without acknowledging how relationships between trainees might be relevant. They note that “training will take place in the context of interactive connections between the trainer, the trainee, and other beings and Beings who are part of the picture” (2017, 239–40). They also recommend that numbers be limited to assure “the possibility of real relationship between trainers and trainees” (2017, 241–42). This focus on the trainer-trainee relationship is clearly expected to continue through the physical separation (2017, 248–49) but again there is no acknowledgement of post-training roles that fellow trainees might have. Another concern is a potentially mixed message in their invocation of Paolo Freire’s critique of “the ‘banking model’ of teaching” (2017, 241), and their other references to theorists of adult education (2017, 95–125), with their warning to maintain “the distinction between teacher and student” lest those from Western cultures are surprised by less egalitarian host cultures (2017, 243–44).

2.E.11 Missio-Nexus Report (2019)

A very recent study of 14 North American mission agencies noted a potential methodological flaw in the WEA research. In contrast to the WEA ReMAP research, this recent study gathered responses not just from mission organisations, presumably the leadership in home offices, but also from field leadership and members. They noted that there were often significant differences in attributed reasons for missionary attrition between the member, the home office, and field leadership on many of the responses suggesting that, in the past those responses which attributed missionary attrition to team conflict might not be quite as important as believed (Missio Nexus 2019).

2.E.12 “The Missions Experience” (2020)

Similarly Andrea Sears has surveyed missionaries themselves on the reasons why they left the field. One of her conclusions is that whilst some 70% of workers experience conflict on their teams, and conflict still had one of the stronger indices affecting the return decisions of some 64%, it was not the single biggest factor (Sears 2020).

In any case, neither the Missio-Nexus report nor Sears deny that conflict with other missionaries is significant. However, they do provide a warning that attributing missionary attrition to this cause alone is overly simplistic.

2.E.13 Summary of Training Cross-cultural Workers

This survey of missionary selection, training, and attrition has given a perspective spanning the last three decades which confirms the importance of training not just in the content but in relational skills and in spiritual and character formation. There is strong agreement from these sources that such training is best done in the kind of community that most naturally forms over a period of time in a residential setting. The value of continued learning and communities of practice on location has also been noted.

2.F CMS-Australia Training Background

Having considered external perspectives, it is now appropriate to examine sources from within the history of the organisation of interest to this research. From the earliest days of the Church Missionary Society (CMS-UK), training has been a priority. As St Andrews Hall (SAH) was established by the Church Missionary Society of Australia (CMS - Australia), the first Warden re-articulated that the training of missionaries was primarily seen as a spiritual exercise with orientation to the field seen as secondary (Foulkes 1965). The following sections discuss various material relevant to the history of the organisation's views on the nature of missionary training.

2.F.1 CMS-UK (circa. 1799)

When the Church Missionary Society (CMS-UK) was established in London in 1799, its founders drew on the experience of its older sister, the London Missionary Society (LMS). The LMS centennial history notes that their selection and training policies “led to somewhat disastrous results . . . [for] in the face of the enthusiasm . . . [for] the great mission to the South Seas . . . [the Directors did not feel it was possible] to insist [upon] . . . at least two or three years’ intellectual and spiritual training” (Lovett 1899, 46). The bold endeavours and near disasters of the LMS during those early years were clearly known by the founders of CMS (Stock 1899, 67) and likely gave rise to its set of five founding principles including “begin on a small scale”, and recognize that “under God, all will depend on the type of men sent forth” (Stock 1899, 63). In short, there was a clear recognition of the need to select and train “spiritual men for spiritual work” (Stock 1899, 71).

Selection and training has been maintained as an important value passed down over the intervening 220 years, not just within CMS-UK but also to CMS-Australia, with the first branch founded in 1910. A consultant to CMS-UK, missiologist Dr J.H. Oldham, wrote: “The task of the missionary was to communicate a life, and his training must be related to the development of his capacities to grow, to learn, and to live in fellowship with others” (CMS-UK 1937, 33). This report, on recruiting, selection, and training, also recognised the need for individualised courses to cater

for different backgrounds and future locations, as well as an early recognition of the value of psychological assistance and testing (CMS-UK 1937, 36, 48–50).

2.F.2 Jack Dain (1959)

In 1956, Federal Secretary of CMS-Australia, A. Jack Dain, spoke to a convention in Indiana (USA) of the need for very careful selection and training of those who would serve as missionaries. He identified four main areas of consideration: Mental Alertness or Academic Attainment; Physical Fitness; Emotional Stability, including both the ability to get on with others and the inner emotional life; Spiritual Maturity, including concepts of calling, disciplined living, true holiness and true humility and true compassion. He also spoke of the importance of residential contact:

It is my own growing conviction that the only satisfactory method of selecting missionary recruits includes . . . a period of at least three months' residential contact within the mission home; or within some other community in which conditions will, at least to some extent, correspond to those on the field. (Dain 1959, 12)

2.F.3 Publications, Press Releases, and Articles (1964)

When SAH was opened in 1964, candidates were expected to have already obtained “their professional training plus a year of biblical and theological training.” A press release discussed various areas of training, most of which remain in the course. Significantly, there is a clear statement that “emphasis will be placed on living and working together in Christian fellowship” (CMS-Australia August 4, 1964, 2).

This revealing statement appears in a brochure contemporaneous to the opening of SAH:

Experiencing the fellowship of the Christian family—the ideal of life at St. Andrew's—carries with it the deepest lessons of all. The varied nature of this community and the different temperaments and backgrounds of the candidates provide a situation that makes team members and not individualists, so necessary in today's missionary situation, and calls for a growing understanding of Christian love. (CMS-Australia 1965, 3)

The lead article in the 13th of August, 1964 edition of *The Australian Church Record* announced the opening of St. Andrew's Hall on the 1st August with the headline: “Interstate Rivalries Forgotten” (*Australian Church Record* August 13, 1964). Canon

Dain's emphasis, reported in the first paragraph as: "There is no place for interstate rivalries in the work of proclaiming the Gospel" (*Australian Church Record* August 13, 1964), hints at an historical rivalry between Sydney and Melbourne in many areas of life. That rivalry remains and can be a significant step for some in their cross-cultural training.²⁹ However, that headline also testifies to the ongoing function of St Andrew's Hall, not only in training candidates from all over Australia and New Zealand, but in tangibly unifying CMS-Australia's six branches.

2.F.4 Francis Foulkes (1965)

The first principal³⁰ of SAH, Dr Francis Foulkes, wrote on the subject of missionary training in March 1965, about 12 months into his tenure. He identified three areas of training, including each of the three dimensions above though grouping them differently. The first area he terms "spiritual training" and describes this as "designed for the strengthening of the candidate's Christian life, and in particular a time of increased development of a disciplined life of Bible study and prayer." Also within this first spiritual area he includes personal relationships including the necessity to "help people of different temperaments and from different backgrounds to live together in the fellowship of Christian love and thoughtfulness, and to work together as a team." The second area, mental equipment, he sees not just as academic ability but "the desire and the ability to learn the language, the ways and customs,

²⁹ The regional differences between Sydney and Melbourne extend from predominant sporting codes (Rugby League and Rugby Union in Sydney vs Australian Rules in Melbourne) through to theological differences. One such difference with active debate over the last several decades, and therefore relevant to many trainees included in this study, has been the stance on the roles of women in the church as either egalitarian or complementarian (noted also in staff interview responses Appendix 4.A.2). Whilst the Anglican diocese of Melbourne has been prominent in ordaining women to the offices of deacons, priests/presbyters, and bishops, within the Anglican diocese of Sydney the ordination of women has been limited to the office of deacon. Statistics of the number of ordained clergy across the various Anglican dioceses of Australia published in November 2020 show both the relative strengths within the communion, with some 667 total active clergy in Sydney compared to 372 in Melbourne, and the differences in gender distribution, showing 42 (~6.3%) women in Sydney compared to 102 (~27.4%) in Melbourne (Australian Anglican Directory 2020, 28). The differences in stance on this issue appear to have been reflected mildly within the consideration of tension and conflict (4.B.7, 104).

³⁰ The title has changed over the years, from Warden, to Principal about 1974, to Development and Training Secretary about 2008, to (currently) Director of Training and Development. The generic term 'principal' will be used in this dissertation.

and the religious background of the people to whom the candidate is sent.” The third area of training was to consist of “the widest possible practical experience,” within which Foulkes includes “some kind of Christian service in which he or she may not have had previous experience” (Foulkes 1965).

2.F.5 David Penman (1977)

The second permanent principal of SAH, and later Anglican Archbishop of Melbourne, David Penman, wrote in 1977 of the task:

Therefore, when they come . . . we ought to be able to assume that in almost every case these professional and biblical standards will have been met (for husband and wife) and that our basic task, in the short time available to us, is in-depth personal spiritual training and orientation to the country, church and people whom they will serve. (Penman 1977)

Penman refers elliptically to the challenges of communal living:

Most of us have the privilege of choosing our own marriage partner and the social environment in which we shall live and work! It is a privilege that we have come to accept as our right . . . except for those who have the good fortune to be chosen by the Society under God to become candidates for missionary service. . . . In some senses, many of our students will seldom find a more trying environment, and we never tire of encouraging them with this perspective. (Penman 1977)

This was part of a speech delivered to a forum in the Pacific incorporating three topics which again resonate with the areas considered so far: First, “irreducible standards,” addresses the matters of more academic and skills training. Second, “the role of ‘community’ in the discovering of oneself,” reflects upon the inevitable disparity between the glowing references under which candidates arrive and the reality understood over time, observing “in almost every instance, as the weeks of sharing in community pass by, none remains unscathed by the pressures and the tensions that come from learning more fully of the very real humanness of each of their colleagues.” Third, “the servant calling,” notes the need for candidates to renounce the individualism schooled into them over many years by culture and “to enter into a community (with all the attributes and claims to being a family) and to begin to learn in a new way how to serve and to wait upon others” (Penman 1977).

2.F.6 Jeanette Boyd (1986)

In a training analysis conducted in 1986 Jeanette Boyd, then Vice Principal, listed eight course aims from a college manual summarised here as: gospel understanding; biblical basis of missions; cross-cultural communication; deeper relationship with God; relating to other people; preparing to adjust to different cultures; knowledge and understanding of their location placement; and a deepening sense of belonging to the organisation (Boyd 1986, 21–22). These span the three dimensions that have been identified above. She also assessed a number of strengths and weaknesses of the course and suggested 21 changes including: a reduction in “cognitive input” in favour of time for “in-ministry experience, dynamic reflection and spiritual formation”; “some form of accountability . . . for spiritual formation and personal development”; more individualization of the curriculum; and, “an open apprenticeship style of training” (1986, 31–35). Under “dynamic reflection” she describes learning that a lot of this took place informally . . . over the meal table and . . . when they got together to discuss issues that arose in the course of study or interaction with each other” (1986, 8). Boyd also noted the selection or discernment function of the course, noting: “In a sense the drop-outs during training are really successes as the training has helped them to discern their gifts and calling in a clearer way” (1986, 5).

2.F.7 Summary of CMS Training Background

This brief examination of the roots of CMS-Australia indicates that there has been a consistent recognition of the need for appropriate selection and training of missionary personnel. The kind of work for which they are selected and trained has always been considered as ‘spiritual work’ requiring men and women spiritually equipped and resilient. However the other two dimensions, namely a more objective body of knowledge identified as ‘orientation’ and the ‘ability to get on with others,’ have been almost equal in importance. This examination has also noted the emphasis placed upon training in a community setting where trainees are experiencing the fellowship of the Christian family.

2.G Summary of Theory

This section draws together the material reviewed so far, and presents a three-dimensional model of learning that informs the direction of this research. This model is explored with particular reference to the influences of peer-trainees in communities of learners, both in focused learning communities and in looser communities of practice.³¹ Some relevant questions are raised and the focus of the subsequent study is outlined.

2.G.1 Three Dimensions of Learning

The exploration to this point has revealed a consensus of evidence for three dimensions of learning. That evidence comes in a number of different but related fields including philosophy, adult education, tertiary education, psychology, and in the training of missionaries, both generally and within a particular organisation.

The first dimensions will here be termed *Instrumental Learning* (IL). This kind of learning might be described as learning about the world and how to manipulate it. The learner approaches some area of content as subject to object. Thus IL is ‘objective’ learning, where there is some ‘content’ which can be defined and which is substantially the same for each learner.

The second dimension will here be termed *Communicative Learning* (CL). This kind of learning might be described as getting on with other people. The learner approaches an ‘other’ as subject to subject. Thus CL is ‘inter-subjective’ learning, recognising the particularity of the interaction pair and acknowledging the potential for bi-directional conscious intentional influence. In other words, “this other person is someone I can ‘know’ in some way and who can influence me, just as I might influence them.”

The third dimension will here be termed *Reflective Learning* (RL). This might be thought of as character and spiritual formation. Thus RL is ‘subjective’ learning,

³¹ A proposed distinction between these terms is clarified below (2.G.4, 52).

primarily concerned with the inner life of the learner. Here might be located the spiritual relationships of ‘faith’ and the space for ethics that one might term ‘character,’ encompassing matters of will and volition.

2.G.2 Learning in Community

The importance of communities in learning is another thread traced through this discussion. Vygotsky suggests a fundamental role of social interactions in the development of language and other higher functions, in which case such interactions are important to a broad range of learning. Palmer reminds educators that learning in community is not a “mere pedagogical convenience” (P. J. Palmer 1993, 36) nor is it primarily for the efficiency of teacher-student ratios. Rather, he asserts that the honest dissent and openness to change that foster intellectual rigour almost require the soft values found in safe communal settings. Piercy also emphasises the value of such safe learning environments noting that adults learn in relationships of mutual respect.

The collection of graduate attributes studies suggests three further points of interest. First, they suggest that learning communities might help meet psychological needs for belongingness and connectedness and thus enhance the motivation to learn in general, as suggested by Self-Determination Theory. Second, those studies imply that learning communities might take different forms, with an initial broad form, orienting the individual to university life, and a narrower form, drawing the individual into the discipline-specific practice. Third, they also suggest that the influence of learning communities might be biased across the three dimensions identified earlier, with less influence upon the instrumental (IL) and more in the communicative (CL) and reflective (RL) areas.

New Testament writings depict the central place of the local body of believers as the setting of learning. Such learning might arguably be considered the more important aspects of the Christian life, namely, how to live with one another (CL), and how to grow integrity in relation to God (RL).

Numerous missionary training sources offer the insight that some of the most important lessons might come from apparently negative experiences. Meeting the

challenges, and even the disillusionment noted by Bonhoeffer, arising from living in close community and being confronted with the failings of both self and others, constitutes valuable learning in both Reflective and Communicative dimensions.

2.G.3 Continued Learning in Community

Most of the material presented here has concentrated on the focused setting where gathering together for learning is the main activity and separated from the practical application of that knowledge and skills. However, all such training has been with the prospect of that practical application and there is a tacit recognition that ongoing learning will happen when those practical situations are encountered. The growing expectation in various professions of continuing professional development also needs to be considered in terms of cross-cultural mission work. It has also been observed that the very identity of Christians as disciples implies ongoing learning.

2.G.4 Clarification of Community Terms

It is necessary to clarify terms used in discussing various aspects of learning in community. While in the literature there is substantial overlap in the use of the terms ‘Learning Community’ and ‘Community of Practice’, this researcher would like to make a clearer distinction between these two, and proposes the following definitions of terms to be used from this point forward.

Learning Community (capitalised) will be used predominantly when referring to a community of people gathered together for the primary purpose of learning for a substantial period of time, and substantially separate from any active engagement in ‘practice.’ An obvious example is the community formed within a discipline at an institution, including full-time students, teachers, and sometimes researchers.

Community of Practice will be used for a community of people where the primary activity of members is some common interest, profession, or ‘practice’ in which they might all be separately or corporately engaged but from which periodically they might briefly refrain in order to gather and consolidate practice-relevant learning. An example is a group of professionals gathering on a regular basis to discuss elements of their practice in different settings.

Community of Learning will be used where the intent is more general and could encompass either of these, and potentially other, designations.

2.G.5 Areas to Explore

Bringing the theoretical and historical-contextual insights of this chapter to the present context of training cross-cultural workers for missionary work, three significant questions arise.

How much does it matter that people learn in community?

People continue to learn alone and many appear to find this preferable, whether through books or through more recent innovations such as MOOCs (Massive Open Online Courses). Neither of these explicitly require community, though in each case forms of community might be attached, for example with book clubs, small group assignments, or peer marking of assignments (Luo, Robinson, and Park 2014). The dimension of interest is most commonly assumed to be instrumental learning, and the implicit goal is the efficient transfer of objective knowledge. One might argue that in this instrumental dimension there is marginal benefit from the shared foolishness of one's peers and most people would presumably prefer to learn from the most brilliant, or at least the most eloquent, exponent in the field. This all suggests that perhaps the impact of community might not be reduced in this dimension.

Does it matter that our learning goals extend beyond that narrow field of objective (instrumental) knowledge to the development of character and the ability to work with others?

The above consideration suggests that these wider goals should be more prominent generally in education. As we turn specifically to the field of missionary training, which has consistently identified the importance of development in the non-instrumental areas, the influence of community and specifically of peer trainees might well be much greater. Indeed it may be no coincidence that in these settings the value of learning in residential community has been a repeated recommendation and the wisdom of generations in this area needs to be considered appropriately.

How should we make decisions on residential training courses versus other forms when there are few measures of how important living and learning in community might be nor of the particular aspects of peer interactions which might be of most benefit?

Several of the materials considered above—for example, the organisational sources and Bonhoeffer—hint that gravitating to positive over negative aspects of community might thwart some of the aims of communicative learning. Even the experience of conflict and the disillusionment of being confronted with failings and sinfulness in oneself and others have been noted as of importance.

In judging these three overlapping areas of exploration we will benefit from better understanding what is at stake. In particular we should consider both the ways in which peer trainees enhance the various dimensions of learning, and the relative contribution of this influence when compared to other major factors, such as that of staff and private study. In this we might also consider how persistent such relationships might be and whether they continue to have a role in continued learning, as might be the case in a community of practice.

The main aim of this research project is thus to explore the ways in which intra-cohort relationships amongst peer trainees in a residential training course might make important contributions to the development of cross-cultural workers in these instrumental, communicative and reflective dimensions of learning and to do so in ways which give some indication of the relative significance of such influences.

A secondary aim is to determine how the relationships formed in such cohorts might continue to make significant contributions to ongoing support and development of trainees.

2.H Stance towards Educational Theories

Those who conduct educational research typically place that research within a framework of educational theory. There are many such frameworks from which to choose. For example, Sharan Merriam and Rosemary Caffarella briefly summarise five major frameworks in which learning might be understood: Behaviourist,

Cognitivist, Humanist, Social Learning, and Constructivist (Merriam and Caffarella 1999, 248–66). Writing from an explicitly evangelical position, Robert Pazmiño presents an alternative division covering many of the same theorists, but in three loose groupings based upon a model from Hollis Caswell: Perennialism and Essentialism with a focus on content, Behaviourism, Reconstructionism, and Progressivism centred on society, and Romantic Naturalism and Existentialism with a focus on the person. He also notes Progressivism’s weaker links to the person-centred approach and the influence of Postmodernism (Pazmiño 2008, 117–24). However, Pazmiño resists the push to choose between them, noting strengths and criticisms of each and encouraging educators to recognise the insight he attributes to Dewey that “education embodies teaching content to persons in the context of their community and society; extremes in any approach limit a holistic perspective” (2008, 124).

Ultimately though, Pazmiño relativises all of these educational theories under his more general God-centred approach (2008, 124–26). Importantly, a God-centred approach also expands the consideration of potential influences towards education. Rather than limiting the consideration of potential influences to what might be regarded as attributes of nature passed on directly through genes—arguably things like intelligence and physical abilities—or the influence of the nurturing environment—including the historical circumstances of the learner within a family, society, culture, and physical environment—a God-centred approach explicitly allows that the learner might be directly influenced by the spirit of God.

A biblical worldview recognises the essential helplessness of fallen humanity, that none of us are capable of achieving those advancements to which we strive, either personally or as a society. Whilst this inability doesn’t absolve humanity from responsibility it sets the scene for the acceptance of grace, which addresses both individual and societal wounds. This research also takes this God-centred approach, recognising the true insights that each of these philosophical stances might reveal, on the basis that all truth is God’s truth (Augustine 426AD, bk. 2 chapter 18), but taking the position that God’s word should frame overarching worldviews.

More particularly, whilst all those known to be working in the field of evangelical Christian missionary training clearly adopt this God-centred framing worldview, it is

observed that teaching methodology leans toward a constructivist approach. When teaching staff self-consciously adopt a model of transformative learning or teach towards producing reflective practitioners, they are in effect adopting a constructivist theory of learning. However, this might be modified somewhat with aspects of social learning in that, particularly in residential settings, the teaching staff are conscious of their own examples both individually and in social interactions with trainees and other staff. This research project recognises this mix of constructivist and social learning, and indeed is seeking insights in the latter's realm.

The next chapter describes the methodology for the present study which furthers these aims. However, before proceeding with the reporting of that study an excursus provides some specifically biblical background.

2.I Excursus: Three Dimensions of Biblical Maturity³²

The purpose of this excursus is to indicate ways in which the educational model proposed earlier (2.G.1, 53), constructed with three dimensions of growth and learning, parallels the well-known triad of faith, love, and hope seen in the New Testament writings. This excursus briefly presents a biblical conception of maturity modelled on Jesus Christ. This conception of maturity is then linked to the triad of faith, love, and hope³³ as presented in various New Testament books. Finally, this framework is presented with points of connection to the three dimensional model of growth and learning which forms the main basis of this dissertation.

2.I.1 Biblical Encouragement to Maturity

Jesus told his disciples “you are to be perfect as your heavenly Father is perfect” (Matthew 5:48). This statement, at the end of a section of the Sermon on the Mount in which five Mosaic laws regarding interpersonal relationships are extended in application (Matthew 5:21-48), occurs as the summary conclusion of the instruction to “love your enemies” (Matthew 5:44) implying that this perfection should at least include relational aspects. Similar Old Testament passages encourage the people of Israel to be holy (קדוש qadosh, Leviticus 19:2) and blameless or complete (תמים tamim, Deuteronomy 18:13) implying an integrity of behaviour appropriate to their association with God and recalling that completeness of righteousness of Noah (Genesis 6:9) and basis of the covenant with Abraham (Genesis 17:1).

In Old Testament terms the goal of biblical maturity or perfection is largely conveyed by the concept of righteousness. This righteousness encompasses love of God—as covenantal faithfulness towards God—and love of neighbour—as merciful

³² Thanks to Dr Stephen Fyson whose comments prompted the inclusion of this material.

³³ The order here follows the more common one found in Colossians 1:4-5 and 1 Thessalonians 1:3, rather than perhaps the more familiar order of 1 Corinthians 13:13, where love is placed last—no doubt ‘for emphasis’ as Paul focuses on its apparent paucity in the Corinthian church.

care both to those who share that covenantal status as well as to the stranger within their land.

As Paul writes to the various churches he puts before them the idea that this ‘maturity’ or ‘perfection’ or ‘completeness’ is to be found by conforming to the model of Jesus Christ (Ephesians 4:13; Colossians 1:28; 2:10). This concept of maturity might be distinguished from that inherent in some theories of education, for example humanistic theories, in which the assumed goal of life is some form of self-actualisation. By contrast the Bible makes it very plain that the individual person finds ultimate meaning and purpose only in relationship to God.

2.1.2 A Triad of Biblical Maturity

At the conclusion of 1 Corinthians 13, Paul identifies the triad of faith (πίστις), hope (ἐλπίς), and love (ἀγάπη) in such a way as to imply that they should be “a *familiar* triad” recognised by his listeners (Hunter 1938, 428 italics in original). Whilst it is possible that this triad had arisen within the Corinthian congregation(s) and Paul is responding to a communication from them unknown to us, from other evidence it is more likely that the three elements formed a core framework for early church teaching, one which Paul himself had taught. Archibald Hunter identified this triad as “perhaps a sort of compendium of the Christian faith current in the Early Apostolic Church” (Hunter 1938, 428).

Even to present day ears faith, love, and hope remains a familiar triad yet its place in recent theological scholarship is surprisingly subdued.³⁴ Yet, as seminary professor Gene Getz notes:

Those three qualities form a divine trilogy—a trilogy that jumps off the pages of the New Testament letters and forms a comprehensive perspective for evaluating Christian living. (1995, 74)

³⁴ As an example, the researcher perused the contents pages of seven volumes dealing with the life of Paul with none devote substantial attention to this triad. Skimming through, it seems as though the triad is dealt with, even assumed, but not treated as a significant theological construct.

Indeed Getz links this triad with what it means to be mature in Christ:

Paul often used these three words to define what it means to ‘become mature, attaining to the whole measure of the fullness of Christ’ (Ephesians 4:13; see also 3:19). Whenever he could, Paul thanked God for churches which reflected these three qualities. In fact, he boasted about these churches to others. (1995, 75)

This section briefly reviews some reasons in support of the idea that indeed these three formed a kind of core curriculum of the Christian life within the early church. This proposal is supported by other hypotheses concerning the prevalence of mentions and possible development of the concepts. The first hypothesis is that evidence for this triad can be found in some form in most of Paul’s letters. The second hypothesis is that this framework underwent some development during the period of Paul’s ministry, and thus the triad appears with slight but understandable modification in his later epistles. The third hypothesis is that this triad can also be observed in other New Testament writings, again with some modification. The fourth hypothesis notes that this triad continues in other extra-canonical sources from the early church. The following is a very brief summary of the evidence for these hypotheses.³⁵

In support of the first hypothesis that this triad can be found in almost all of Paul’s letters, the following references explicitly mention the three elements in close proximity (1 Corinthians 13:13; 1 Thessalonians 1:2-3; Colossians 1:3-5; Galatians 5:5-6; Ephesians 1:15-18).

The second hypothesis, that there is a development in Paul’s conceptualization of the triad, rests on the observation that in 1 Thessalonians 1:2-3 Paul pairs each of these elements with a descriptor—thus “work of faith” (τοῦ ἔργου τῆς πίστεως), “labour of love” (τοῦ κόπου τῆς ἀγάπης),³⁶ and “steadfastness of hope” (τῆς ὑπομονῆς τῆς

³⁵ Note that the underlying analysis has been done in the Greek text with the principle noun forms but the details are not reported here.

³⁶ An additional insight into Paul’s understanding of the relational aspects of τοῦ κόπου τῆς ἀγάπης may be gained from Luke’s only two usages of κόπος, referring to the bothersome demands of a late-night friend (Luke 11:5) and of the woman before an unjust judge (Luke 18:5).

ἐλπίδος)—and proposes that Paul sometimes substitutes the descriptor, “steadfastness” or “perseverance” (ὕπομονῃς), in place of the main element, “hope”. Thus, there are several references where faith (πίστις) and love (ἀγάπη) are combined with steadfastness (ὕπομονῃς). The fact that these tend to occur in the, presumably, later writings of the Pastoral Epistles³⁷ suggests a development in Paul’s thoughts or that he was refining his communications for greater understanding (1 Timothy 6:11; 2 Timothy 3:10; Titus 2:2).³⁸

In other places within the Pauline corpus, some important passages, apparently structured around the triad, are longer but generally form part of a developing discussion. For example in Romans 12 which begins with a statement about maturity, (Romans 12:2), Paul then notes the outcomes of “faith” in verses 6-8, of “love” in verses 9-10, and “hope” in verses 11-12. Similarly, the passage of Ephesians 4:1-16 touches on hope (v4), faith (vv4, 13), and love (v15-16), with a similar connection to the concept of maturity.

The third hypothesis, that other New Testament authors also refer to this triad, is taken by Hunter as evidence that the triad might not have been Paul’s creation, “but something common and apostolic, perhaps a sort of compendium of the Christian faith current in the Early Apostolic Church” (Hunter 1938, 428). This is supported by another set of passages which also display some modifications of vocabulary but expressing the same concepts. Thus love (ἀγάπη) might become brotherly-love (φιλαδελφία) and/or hope to steadfastness, and in the case of Revelation the descriptors replace all three elements (Hebrews 6:10-12; 10:22-24; 1 Peter 1:21-22; 2 Peter 1:5-8; Revelation 2:2).

³⁷ The assumed base here is the traditional Pauline corpus of 13 letters, starting with Galatians in about AD48 through to 2 Timothy written shortly before Paul’s execution in Rome, around AD64. The Pastoral Epistles refer to 1 Timothy, Titus, and 2 Timothy, all assumed to be written in his final period of imprisonment in Rome.

³⁸ The presence of ‘perseverance’ rather than ‘hope’ in the relatively early letter 2 Thessalonians 1:3-4 is harder to explain on this development hypothesis. Given the end-times focus of 2 Thessalonians, Paul wishes to emphasise their perseverance. Similarly, when writing to Timothy and Titus, Paul faced imminent execution and again he particularly emphasised perseverance.

The fourth and final hypothesis presented here, that this continued in other extra-canonical sources, is based upon the observation of Hunter that the triad can be found in the writings of Barnabas and Polycarp (Hunter 1938, 428).³⁹ Indeed in Polycarp's Epistle to the Philippians the writer makes clear that the goal of 'righteousness', which we might use as the goal of maturity, is fulfilled by the acquisition of these graces (The Epistle of Polycarp to the Philippians, chapter 3:1-3, as translated by David Robert Palmer, D. R. Palmer 2015, 5).⁴⁰

The tradition of seeing faith, hope, and love as a comprehensive guide to the Christian life is also supported by Augustine in at least two works, *On Christian Teaching* and *Enchiridion*, (Augustine 426AD, bk. 1 chapter 39. 421AD).⁴¹ This suggests that the triad might still have held an important place up until at least the fifth century.⁴²

While much further exegetical work is to be done, what has been presented here is initial evidence in support of this triad having a role throughout the early church as a simple summary of the areas in which Christians should develop.

2.I.3 The Elements of Biblical Maturity

The three elements of this model of biblical maturity are clearly faith, love, and hope, however it is necessary to clarify the particular ways each of these might be understood when used in the triad. It is also helpful to see how they might

³⁹ The references are given as the Epistle of Barnabas 1:4, 11:8, and Polycarp's Epistle to the Philippians 3:2-3.

⁴⁰ Polycarp implies here that the triad is evident in Paul's letter to the Philippians even though the three primary nouns themselves do not appear with the same connections when in close proximity (πίστις Philippians 1:25,27; 2:17; 3:9; ἀγάπη 1:9,16 2:1,2; ἐλπίς 1:20).

⁴¹ Augustine explicitly states in Chapter 1 that the *Enchiridion* is a handbook on this triad written in response to the request by his interlocutor, Laurence.

⁴² This is taken as evidence for the importance of the triad even though Augustine's interpretation of the triad elements differs from that presented here.

correspond to the areas of growth and learning identified in the earlier material of this chapter (2.G.1, 53).

It is helpful to start with Colossians 1:4-5 as these verses contain each of the three elements related to its most common object: “. . . since we heard of your faith in Christ Jesus and the love which you have for all the saints; because of the hope laid up for you in heaven” (NASB). Faith is directed towards Christ Jesus—a current vertical relationship to God. Love is directed towards ‘all the saints,’ i.e. here clearly referring to other living followers of Christ and thus current horizontal relationships. Hope is directed towards what is laid up in heaven—a future reality.

Each of these three elements can also take on either a more passive or a more active sense.⁴³ For example, love is often understood as an affection or even as a desire, but both the nouns and the verbs for ‘love’ are more often used biblically in an active sense such that some concrete action is implied to be the obedient response to a command. Ideally, the passive or affective side and the active or responsive side are in harmony. Thus when Paul commands his readers to love their Christian brothers and sisters (Romans 12:10; 13:8; Galatians 5:13; Ephesians 4:2; 1 Thessalonians 3:12; 4:9; 2 Thessalonians 1:3) it is expected that this should be in accord with their affections.⁴⁴ However, the command to love one’s enemies (Matthew 5:43-44; Luke 6:27, 35) makes it clear that such active love might at least occasionally be more of a challenge. Indeed, Paul classically attaches the word ‘labour’ (κόπος) to the work of loving, which strongly suggests that it requires intention and effort (1 Thessalonians 1:3).⁴⁵

⁴³ The ‘active’ and ‘passive’ described here is conceptual and not to be identified with the verb and noun forms. The triad is here taken as limited to the occurrence of Greek noun forms, excluding the verbal cognates even when translated into English as nouns (e.g. hope in John 5:45; 1 Timothy 4:10; 5:5; 6:17).

⁴⁴ This connection between these active and passive or affective senses of love is made more strongly in 1 John. For example, John seemingly points to the affection, love of ‘the brethren,’ as evidence of passing from death to life (1 John 3:14).

⁴⁵ Whilst it is possible that Paul is engaging in rhetoric here, this seems unlikely given the placement in a prayer of thanksgiving to God.

Similarly, the noun for ‘hope’ (ἐλπίς) can be understood in both passive and active senses. It has already been observed that Paul appears to develop his formulation of this triad from the element of ‘hope’ to the paired descriptor of ‘steadfastness’ or ‘perseverance’ (ὑπομονή). Such steadfastness is required when what might start as a lifting emotion of hopefulness becomes more difficult and when the details of the future are obscured but we are nonetheless encouraged to continue (c.f. the extensive focus on the last things in 2 Thessalonians, from 1:5-2:15).

Finally, the noun of ‘faith’ (πίστις) is used in various senses in the New Testament, sometimes understood as a ‘belief’ but other times taking on the more common understanding of ‘faithfulness’.⁴⁶ There may be a tendency to focus attention on the passages where Paul contrasts ‘faith’ (πίστις) with ‘work’ or ‘works’ (ἔργον) as alternative paths to salvation, and push to the Reformers’ motto of ‘faith alone’ (*sola fide*) where faith is understood more passively as belief. Yet, as observed by Peter O’Brien,⁴⁷ it seems Paul has no difficulty placing these two terms together, as ‘work of faith’ (1Thessalonians 1:3).

On the other hand we know that Paul expects that real ‘faith’ must have this active aspect and so it might be better to translate this as ‘faithfulness’ more often.⁴⁸ At the least it might be appropriate to understand the ‘work of faith’ as actions as a consequence of, and demonstrating, ‘faith’ as trusting belief.⁴⁹

⁴⁶ In the Septuagint (LXX) the word πίστις occurs 29 times within the 39 books of the Protestant OT canon. The NASB translates the underlying Hebrew with the following frequencies: faithfulness – 8, faithfully – 8, truth – 8, trust – 4, and faith – 1. That single time the NASB translates πίστις as ‘faith’ (Habakkuk 2:4) it is also footnoted as “or faithfulness.” Habakkuk 2:4 is pivotal, being quoted three times in the New Testament (Romans 1:17; Galatians 3:11; and Hebrews 10:38). The LXX text reads “ὁ δὲ δίκαιος ἐκ πίστεώς μου ζήσεται”, literally “but the righteous one out of my faith/faithfulness will live” implying God is the one who has faith or is faithful. Hebrews 10:38 has several variant readings with the preferred text as “ὁ δὲ δίκαιός μου ἐκ πίστεως ζήσεται” (NA28), “my righteous one [singular] will live by faith/faithfulness” and thus could be taken to primarily refer to the saving faithfulness of Christ.

⁴⁷ Personal conversation, Singapore 2014.

⁴⁸ The interpretation of the word πίστις is key to a number of debates in biblical studies and even a brief exploration is impractical in this excursus.

⁴⁹ There is no question that Luther understands the expectation that mature Christians will engage in works, as for example in “Our faith in Christ does not free us from works but from false opinions

Getz also points out that Paul often places the three elements of this triad within the initial greetings and thanksgivings of his letters or notes them in his intercessions. Where Paul places an element within the thanksgiving he is affirming this mark of maturity in the church. Where he places an element in his intercessions it indicates that he believes this quality is yet to be displayed adequately. For example, Paul gives thanks for the faith and love of the Ephesians in 1:15 before praying for their hope in 1:18, (Getz 1995, 77).

In summary, when these three elements of faith, love, and hope appear to be used as indicators of maturity they should probably be understood in their more active usage. The tone of 1 Thessalonians 1:3 suggests that this triad is most operative not when it comes easily but when it requires hard work, bothersome labour, and grinding perseverance.

2.I.4 A Framework for Christian Education

These three elements may be utilised for an educational framework. The fact that Paul enumerates these elements (or their descriptors) amongst longer lists (e.g. 1 Timothy 6:11; 2 Timothy 3:10; Titus 2:2) but also collapses them into a summary statement (e.g. 1 Corinthians 13:13) hints at simplification within his own conceptions. It has already been noted from Colossians 1:4-5 that each of these elements has an 'objective' towards which they are directed.

These elements can be imagined as orthogonal axes in three dimensional space.⁵⁰ Faith might be conceived of as a vertical axis with its object as Christ Jesus, love as

concerning works, that is, from the foolish presumption that justification is acquired by works" (Freedom of a Christian, in Dillenberger 1962, 81).

⁵⁰ The orthogonality of these three concepts is a deliberate simplification for the purposes of presentation. These three elements are bound together and cannot exist without each other though they may vary in relative proportions. The researcher's conception is more like an electromagnetic wave (TEM) in which it is impossible to have an electric field component without a magnetic field component but as such a wave travels through different media the relationship between them might change. Other analogies could be found in physics such as interactions with a rotating body, the motion of a screw, or the cross-product in mathematics.

a horizontal axis towards all the saints, and hope as a third axis, so-called ‘out of the board’ towards what is laid up in heaven (see Figure 2.1, 68).

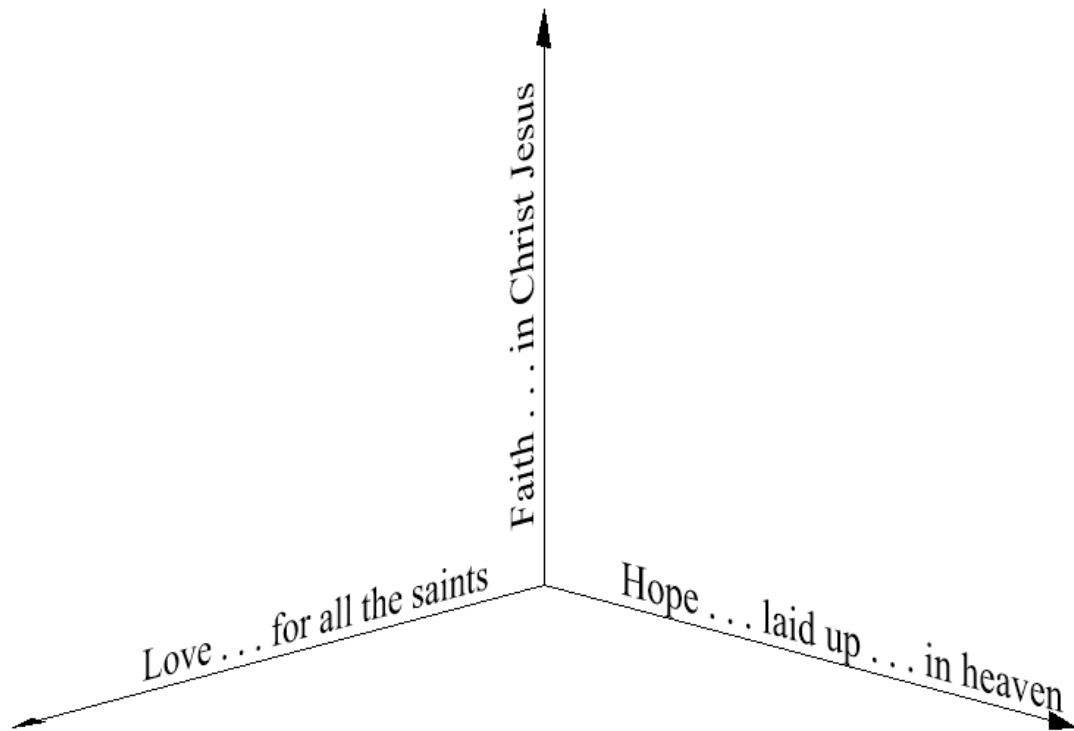


Figure 2.1 Diagram of Faith, Love, and Hope (isometric view)

The vertical Faith axis represents the spiritual relationships between human beings and God to whom we have access through Christ Jesus. Paul tends to illustrate this hierarchical relationship with the imagery of Father to children⁵¹, though sometimes with aspects of patron-client relationships. The actions and language that correspond to this axis sometimes evoke the image of a court or a temple where the relationship is asymmetric in power and expectations. The primary expectation of the more powerful party is to extend grace, mercy, and protection and in response the weaker party is to offer honour, gratitude, and allegiance.⁵² The description of this

⁵¹ Every epistle contains at least a reference to God as Father in the greeting and often elsewhere.

⁵² David deSilva writes: “It is worth noting at this point that *faith* (Lat *fides*; Gk *pistis*) is a term also very much at home in patron-client and friendship relations” (DaSilva 2000, 115). However, also see David Downs’ challenge to the idea that Paul is consistently using patron-client models when he more consistently uses the language of family (Downs 2009).

relationship, which we might imagine codified in a covenant,⁵³ is one of mutual loyalty expressed in actions faithful to that covenantal relationship. Paul uses the language of a royal court in explaining that we have boldness and confident access to God through the faith of Christ Jesus our Lord (Ephesians 3:12).⁵⁴ The writer of Hebrews uses similar expressions to describe access to the throne of grace (Hebrews 4:14) and through the work of Jesus our confidence to enter the holy place, encouraging us to draw near in faith (Hebrews 10:19-22).

In terms of the model of growth and learning presented above, this vertical axis corresponds to the conception of Reflective Learning (RL). Spiritual and character formation describes the ways in which our relationships with our heavenly father enjoy both the natural affections and communications between parent and child and the gradual development of those aspects of character which accord with faithful action.

Second, the horizontal axis might be imagined as a different relational expression of love, how human beings are connected to each other. Before God these relationships are essentially egalitarian, as children relating to each other in the same family, or as various ‘clients’ relating to other ‘clients’ of the same ‘patron’, or as subjects before a king. The world into which Paul wrote had many examples of hierarchical relationships between people. An obvious example where both parties are named is that of Philemon as master and Onesimus as escaped slave. Paul’s language to Philemon richly evokes various claims to authority arising from wealth, life-debt, ownership, business-partnership, and spiritual fatherhood. Yet Paul’s appeal there is based upon the common relationship to God shared by both Philemon and Onesimus

⁵³ For example note instance in 2 Esdras 20:1/19:38 (LXX/NETS) where a pledge or covenant is established “διατιθέμεθα πίστιν.”

⁵⁴ The ambiguity of this phrase “faith of Christ Jesus” has been deliberately retained in recognition of the *pistis Christou* debates over the objective and subjective genitive which continue from about the time of an article by Donald Robinson (Robinson 1970). In the context of this passage the more traditional objective genitive would suggest that our access to God arises from our own belief in Christ Jesus. Robinson’s reading implies that our access to God has been granted in recognition of the faithful actions of Christ Jesus (subjective genitive), an interpretation which is quite convincing. Debate has continued over the last 50 years and is far out of scope in this short excursus. A recent summary landing on the objective (Christological) position can be found at (Kugler 2016) and another for the subjective (anthropological) position (Perez 2020).

so Paul can explicitly elevate Onesimus to the status of ‘brother’ (Philemon 1:16).⁵⁵ Even in the household codes where Paul upholds hierarchical relationships (Ephesians 5:22-6:9; Colossians 3:18-4:1) the final statements (Ephesians 6:9, Colossians 4:1) makes clear that God is Master of both parties.

The expression ‘one-another’ is common throughout the Pauline corpus (e.g. Romans 12:10; 13:8; 14:13, 19; Galatians 5:13; Ephesians 4:2; 5:21; Philippians 2:3; Colossians 3:13; 1 Thessalonians 3:12; 4:9; 2 Thessalonians 1:3). Jesus also makes it clear that ‘love’ should be the distinguishing mark of the community of believers, primarily towards each other (John 15:12), but also towards enemies (Matthew 5:44; Luke 6:27, 35).

Whilst the language of the gospels exhorts love of God together with love of neighbour (Matthew 22:37; Mark 12:30; Luke 10:27), the key New Testament passages dealing with this triad predominantly apply the noun ‘love’ to the realm of relationships between humans. The model of this has been seen in Colossians 1:4 where Paul thanks God for their love for all the saints. In terms of the model of growth and learning, this axis of ‘love’ corresponds to that of Communicative Learning (CL) which deals primarily with interpersonal relationships and generally learning to get on with other people.

Third, what might be conceived as a ‘time’ axis corresponds to the expectation of ‘hope’. The relationship between human beings and time might also be described as how they interact, both personally and corporately, with the narrative of salvation. These interactions include our recognition of relationships between God and people, and key saving events in the past upon which are based our hopes for the future. The biblical concept of ‘hope’ is linked to ‘salvation’ as well as to the expected confirmation of our status before God as justified based upon the finished work of Christ. This ‘hope’, as noted above, requires faithfulness, expressed over time as perseverance.

⁵⁵ See also the analysis of this letter by David deSilva (DaSilva 2000, 124–25).

This axis of ‘hope’ or ‘time’ or ‘narrative’ corresponds to our *prima facie* experience of Instrumental Learning (IL) in the model of growth and learning, our learning about the world and how to manipulate it. The ways in which we conceive of this world for the purposes of scientific enquiry rely upon fundamental assumptions of causation and predictability which presuppose time. Similarly, historical enquiry retraces a narrative against time.

These correspondences between the two models—the biblical triad of Faith, Love, and Hope and the three dimensional model of growth and learning—are represented in Figure 2.2 (71).

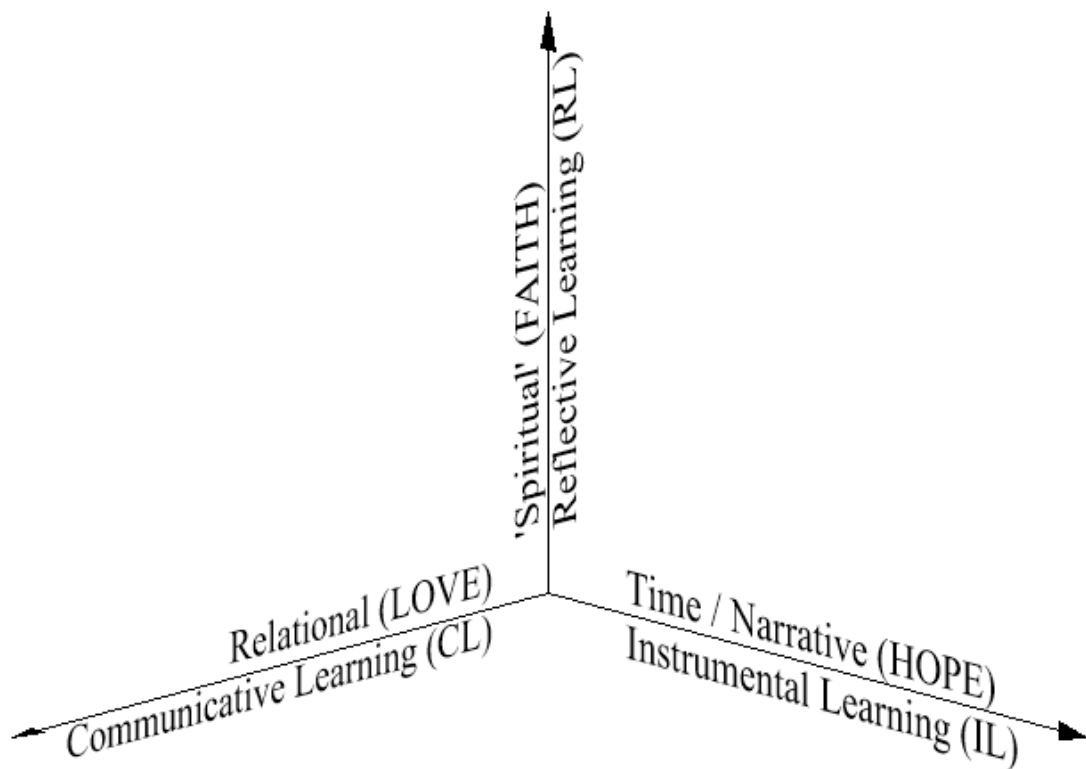


Figure 2.2 Correspondences between the biblical triad of Faith, Love, and Hope and the three dimensional model of areas of growth and learning.

While the model presented here remains tentative, the research study reported in this dissertation has been conducted with this model in the background.

(End of Excursus).

CHAPTER 3

METHODOLOGY

This chapter presents the research questions and introduces the mixed methods exploratory sequential design used in this study. The study was broken into three phases. Primary data was collected and reported in the first two phases and the third phase explored the dataset more deeply, primarily with quantitative methods. This chapter also describes the sampling methodology and ethics approval process.

3.A Research Design

This section presents the research design including the research questions, the study framework, and the development into a phased study flow. The trainee population is described and steps taken to address questions of ethics and permissions are outlined.

3.A.1 Research Questions

The main aim of this research project was stated as:

To explore the ways in which intra-cohort relationships amongst peer trainees in a residential training course might make important contributions to the development of cross-cultural workers in these instrumental, communicative and reflective dimensions of learning and to do so in ways which give some indication of the relative significance of such influences. (2.G.5, 56)

A secondary aim was also stated:

To determine how the relationships formed in such cohorts might continue to make significant contributions to ongoing support and development of trainees. (2.G.5, 56)

These aims were transformed into the following main research question and sub-questions:

- RQ: “How are intra-cohort relationships formed in an agency-based residential training course for cross-cultural workers important to the development of participants during the course and subsequently in the dimensions of instrumental, communicative, and reflective learning?”

- SQ1: “How do intra-cohort relationships contribute to **instrumental learning** of participants?”
- SQ2: “How do intra-cohort relationships contribute to **communicative learning** of participants?”
- SQ3: “How do intra-cohort relationships contribute to **reflective learning** of participants (particularly in spiritual and character formation)?”
- SQ4: “In what ways do intra-cohort relationships continue to provide support and enhance learning in these three dimensions after leaving the specific training?”

3.A.2 Overall Methodology

As an AGST Alliance Doctor of Education dissertation research project, the aims for this study are both conceptual-theoretical and applied. At the conceptual-theoretical level, this study was intended to apply a particular field of educational theory to explore the importance of relationships between trainees in three dimensions of learning. The chosen setting, examining an institution for the training of cross-cultural workers, is one where both theoretical considerations and organisational aspirations (2.F, 48) suggest these dimensions of learning should exist in a relatively equal balance. Justification for this need for ‘relatively equal balance’ lies in the reality that CMS-Australia selects and trains people for mission work in recognition that the work into which they are sent typically requires, not only a thorough understanding of the bible and of culture but also mature interpersonal skills, a high degree of personal integrity and resilience of character and spiritual life. Thus, in this context all three dimensions seem to be valued relatively equally. The length of the course (five months), the reasonably small size of the cohorts (up to 15 adults), and the residential setting all suggest that such influence might be significant.

In terms of application, the focus on one institution within a single organisational context provides an opportunity to explore issues relevant to the institution, check existing practice, and suggest areas for further development.

The research questions were written and interpreted broadly with the expectation that the most applicable results might be diverse and would likely include both qualitative and quantitative evidence. This further implied that a mix of both qualitative and quantitative methods might be usefully employed, both seeking descriptions of mechanisms and modes of influence, as well as estimating the magnitudes of their effects.⁵⁶

The overall framework was chosen as mixed methods using an exploratory sequential design, beginning with a primarily qualitative enquiry and proceeding with more quantitative methods (Ponce and Pagán-Maldonado 2015; Creswell 2016). John Creswell describes mixed methods as:

An approach to research in the social, behavioural, and health sciences in which the investigator gathers both quantitative (closed-ended) and qualitative (open-ended) data, integrates the two, and then draws interpretations based on the combined strengths of both sets of data to understand research problems.

A core assumption of this approach is that when an investigator combines statistical trends (quantitative data) with stories and personal experiences (qualitative data), this collective strength provides a better understanding of the research problem than either form alone. (Creswell 2016, 2)

Quantitatively the study was built into a three phase design: an exploratory investigation in Phase 1 (focus group interviews with 15 former SAH trainees, and individual interviews with 2 current and 2 former SAH teaching staff), through a gathering of quantitative evidence in Phase 2 (an online survey with 125 former SAH trainees), and towards further analysis and insights in Phase 3.

Phase 3 was further subdivided into four main tasks of analysis. Task 1 aimed to establish the validity of considering three domains or dimensions of growth and

⁵⁶ It may have been possible to frame this research as a case study (Creswell 2012, 465–66), with the case being the training institution of SAH. The range of data collected represented a relatively long period of several decades and a fairly comprehensive examination of the trainee experience. On balance though, the emphasis on quantitative methods used in analysing the survey suggest that mixed methods is the more appropriate category for this research. This was decided at least partly by the researcher's perceived strengths and interests. It is also noted that the relative importance of quantitative methods in this study is a modification of Creswell's common formulation of the exploratory sequential design (Creswell 2012, 543–44).

learning as well as the kinds of learning that might be assigned to each dimension. Task 2 used these results to estimate the contribution and bias of six influences upon learning, so that the relative importance of the influence of fellow trainees could be assessed. Task 3 continued to explore the ways in which that influence might be manifest during the course both quantitatively and qualitatively. Finally, Task 4 considered some quantitative and qualitative evidence for ways in which fellow-trainees might continue to influence and support learning after the course.

Qualitatively, evidence was gathered throughout the study, notably with various interviews in Phase 1 but also supplemented with text responses collected from the same 125 former trainees as part of the survey in Phase 2. The qualitative investigation included structured analytical methods using Computer-Aided Qualitative Data Analysis software, R package for Qualitative Data Analysis or RQDA (Huang 2018) as well as less structured methods such as checking that comments matched multiple choice response patterns (see 3.B.5 85 and 3.C.8, 93).

The primary data for this study focused on that gathered directly from the 15 former trainees in interviews and the 125 survey responses as described above. Secondary data included consulting with various other SAH sources to guide the investigation and to triangulate findings. These secondary sources included:

- ☐ Course evaluations;
- ☐ Course timetables;
- ☐ Interviews with past and present SAH staff (noted above);
- ☐ Archival records of trainees;
- ☐ Archival records of reports and discussion papers; and
- ☐ Internal and External publications.

3.A.3 Overall Study Flow

As outlined in Chapter 2, the driving learning theory behind this investigation is that three domains or dimensions of growth and learning are in operation in educational

settings, and that all these dimensions might be of similar relevance in the kind of training that occurs at SAH. These dimensions have been provisionally named as Instrumental Learning (IL), Communicative Learning (CL), and Reflective Learning (RL). To answer the research questions above, this study was broken into three main phases, the first phase was exploratory and qualitative with primary data collection in focus group interviews, the second phase primarily quantitative focusing on data collection through a survey, and a third phase also primarily quantitative using the data of the second phase in more advanced statistical analyses. A summary of the overall study flow is presented in table 3.1, (76), table 3.2 (77), and table 3.3 (77).

Table 3.1. Phase 1 – Summary of Exploratory Qualitative Investigations

Phase 1 – Focus Group Interviews

Aspect	Description
Aim of Phase	Identify concepts that characterise the kind of growth and learning at SAH
Data	Semi-Structured Interviews with Focus Groups of former Trainees, mostly in person (transcribed interviews with two subsequent written responses).
Analysis	Qualitative analysis using the software RQDA.
Sample	15 participants (see details in 3.B.1, 82)
Triangulation	Individual interviews with Staff, (2 current and 2 former)
Data Collection Period	Jun-Dec 2017

Table 3.2. Phase 2 – Summary of Preparation and Administration of Survey

Phase 2 – Online Survey

Aspect	Description
Aim of Phase	Prepare, Administer, and Report a survey of former trainees
Data	Online survey of former trainees.
Analysis	Descriptive statistics Reading through survey comments
Sample	125 participants, sampled by convenience (3.C.1, 85)
Triangulation	Examination of organisation records.
Data Collection Period	Feb-Mar 2019

Table 3.3. Phase 3 – Summary of analytical quantitative investigation

Phase 3 – Survey Analysis

Aspect	Description
Aim of Phase	Assess the contribution of Fellow Trainees towards Growth and Learning
Data	Survey from Phase 2
Analysis - Quantitative	Various methods using R: Inspection of correlation matrices; Confirmatory Factor Analysis (CFA); tests of significance.
Analysis - Qualitative	Qualitative Analysis of text survey responses using RQDA
Sample	125 participants
Triangulation	Examination of organisation records.
Data Analysis Period	April-December 2019 ++

3.A.4 Ethics Approval and Permissions

In the design of this project various risks were considered and measures put in place to prevent or mitigate harm to participants. The researcher has been neither a member of the teaching staff nor a trainee so has come to this study with a degree of

objectivity. However, he has been a senior member of the CMS-Australia staff for 5 years with some responsibility for the selection of candidates. This was recognised as a potential risk and conflict of interest in the study, and the implicit power difference was minimised as far as practicable. Issues of confidentiality were also addressed.

Current trainees were excluded from the study until they had completed the final stages of acceptance as Missionaries of CMS-Australia. Participation in the study was personally encouraged by the researcher and moderately endorsed in organisational communications, and explicit voluntary and informed consent was obtained by signature or survey submission. Identifying information was kept separate from survey results in analysis and results anonymised. Focus group members were requested to keep disclosures by others confidential. For these groups, backup counselling resources were arranged ahead of time in case interviews brought out emotionally troubling memories. Survey information pages identified appropriate ways to access counselling or to make reports. A few survey responses indicating unpleasant times were followed up confidentially by the researcher and these participants confirmed that there was no need or desire for further assistance. Safe participation was assessed by organisational leadership and some participants excluded from the survey, before invitations were sent, for reasons considered unlikely to introduce bias.

Ethical approval for this study was granted by AGST Alliance, Appendix 3.A.1 (228). Permission was sought and granted for this research by the organisation's CEO, Appendix 3.A.2 (235). Information pages were provided and consent obtained, Appendix 3.B.1 (239). Two of the organisation's monthly internal informational emails referred to this survey, Appendix 3.C.4 (277) and Appendix 3.C.5 (277), and encouraged participation, but made it clear that this was voluntary, and no inducements were offered aside from the commitment to provide a summary of findings to those who requested it.

3.A.5 Trainee Population

The institution for this study is the federal training facility of CMS-Australia known as St Andrew's Hall (SAH). Over 1000 men and women have been trained at SAH

since its founding in 1964. The median age of trainees has remained in the early to mid-30's but with a trend for older candidates to be accepted the mean age has increased to about 40 years old and the age-range in cohorts has generally increased over time, as seen in figure 3.1 (80).⁵⁷

Over the cohorts since 1980, the proportions of trainees represented have been:

- Families, with children: 51% (M=0.51, SD=0.17);
- Couples, without children: 27% (M=0.27, SD=0.15); and
- Singles: 21% (M=0.21, SD=0.14). Singles have been predominantly female: Single Females: 19% (M=0.19, SD=0.13), and Single Males: 2.4% (M=0.024, SD=0.039).⁵⁸

⁵⁷ Ages for about two thirds of trainees were found from research into various records including public death notices. A substantial number of those from the first two decades were estimated to the nearest 5 years from photographs and have a wider margin of error.

⁵⁸ The relative absence of single men, and thus higher proportions of female missionaries, has been reality since the early years of CMS-Australia. Although not part of this study, the notably reducing imbalance is discussed amongst suggestions for further research (6.C, 174).

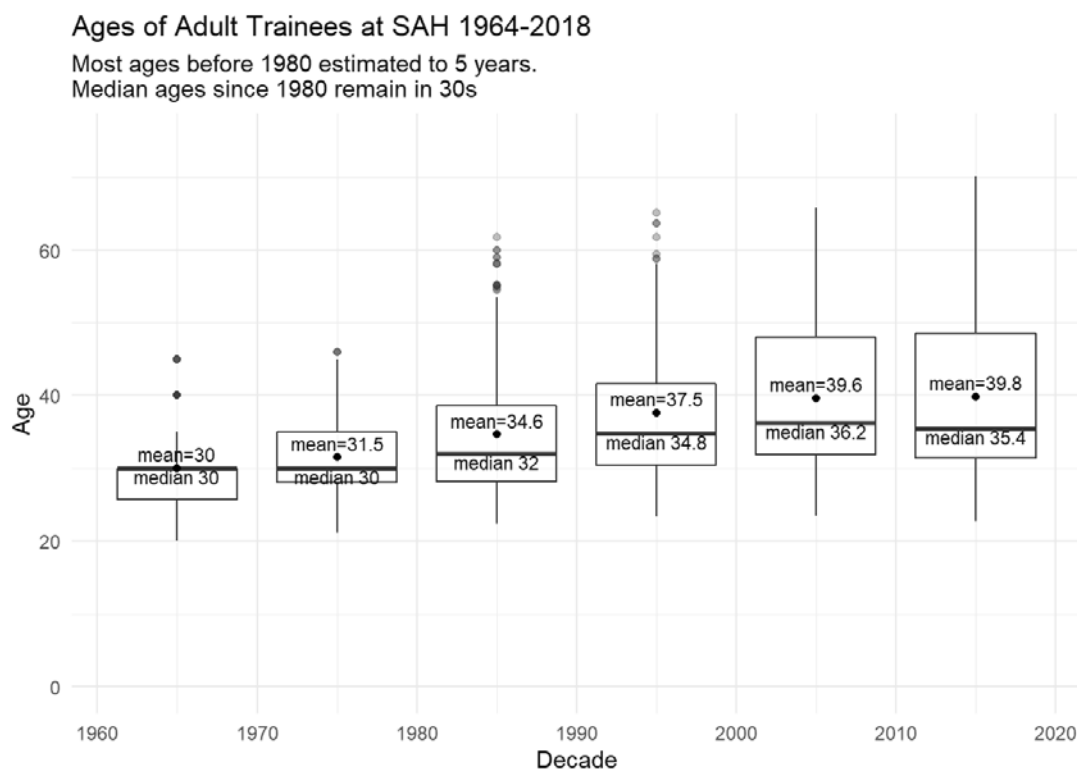


Figure 3.1. Boxplot of Trainee Ages by decade. Most ages before 1980 are estimated.

Generally, trainees would be considered well-educated. An anonymised analysis of educational backgrounds showed an average of over three tertiary degrees or certifications per adult, over a range of disciplines (see Appendix 3.A.3, 237). It has also been a longstanding requirement of the organisation that candidates have completed the equivalent of at least 1 year of formal theological or biblical studies and thus, at least in recent decades, general biblical and theological knowledge has been assumed as pre-requisite material so that the course might focus on the application of theology in missiological reflection.⁵⁹

The majority of trainees have been candidates for cross-cultural mission work from one of the six branches of CMS-Australia (~80%) with a smaller number from the New Zealand sister-organisation, NZCMS, and a few independent trainees. Most of those attending would have been discussing their plans with the organisation for

⁵⁹ See also the staff interview material which sketches the extensive biblical background of typical trainees (Appendix 4.A.2, 303).

between two and five years including an extended selection process and thus would have been aware for a relatively long period of this training requirement. About 5% of trainees are ‘retreads,’ that is, they complete the course for a second time after serving in cross-cultural work for a period, resigning, and subsequently re-offering for a second period of service. Roughly two-thirds of trainees come from the NSW & ACT branch as can be seen from the breakdowns by decade in figure 3.2 (81). All trainees are assumed to hold theological positions within the broad scheme of reformed evangelical Christianity, although there would be some notable state-of-origin correlated separations of positions on various issues⁶⁰.

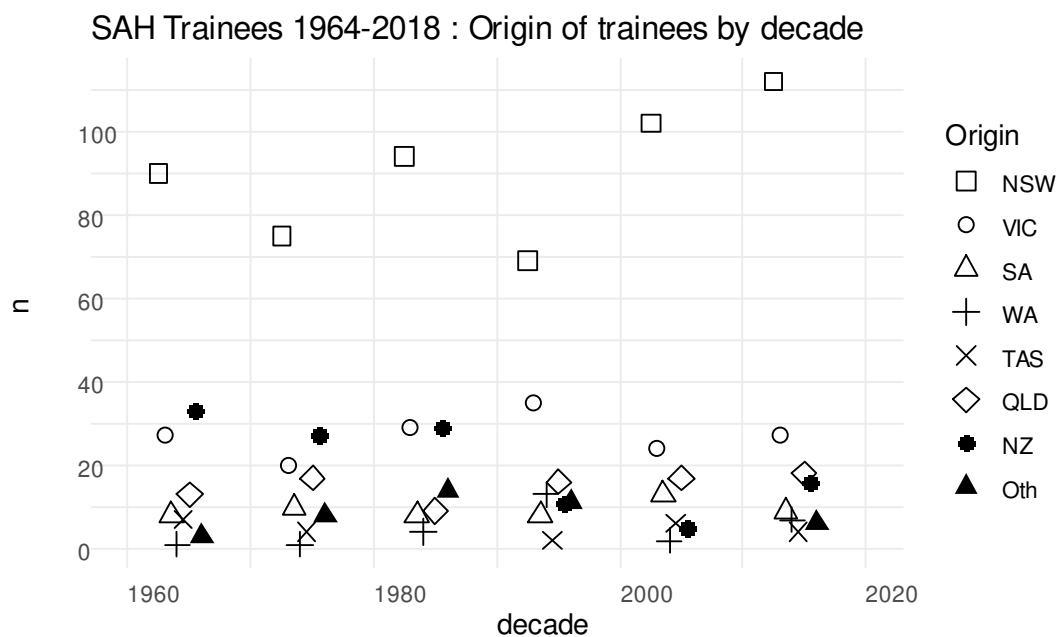


Figure 3.2. Branch or organisational origin of trainees by decade

⁶⁰ Some indication has been given in footnote 29 (2.F.3, 47).

3.B Phase 1 Interviews—Methods

The aim of the first phase was to discover examples of the kinds of learning and growth that might occur at SAH and the factors that might be important. This first phase was undertaken through a series of semi-structured interviews in focus groups of former trainees and separate interviews with staff. The interviews were then transcribed and analysed using qualitative data analysis techniques.

3.B.1 Focus Group Interviews—Sampling

Semi-Structured interviews with focus groups of about five members were chosen as the main methodology for the initial qualitative data collection.⁶¹ Participants for two groups were gathered at an organisational conference during evening free time with group interviews each lasting about one hour. Participation was voluntary and so, to some extent, participants self-selected, although the researcher personally encouraged participation of anyone available. The participation was well mixed demographically though there was a bias towards longer-serving workers. A third focus group was later organised with three recent graduates from one course. Unfortunately the recording failed and two members later submitted written responses which were included in lieu of transcriptions. Another couple were interviewed on the researcher's visit to them in a South-East Asian location.

In summary, the focus group sample showed good statistical representation of the reference population over typical demographic variables (gender, family status, age at time of training, and branch of origin). The group spanned more than thirty years of training cohorts (n=15, 4 single females, 5 married females, and 6 married males; and represented those who had trained both with and without children). (Results of statistical tests against the reference population are given in Appendix 3.B.4, 246).

⁶¹ Two small pilot focus groups were conducted in a separate demographic, the researcher's former Bible college cohort, to confirm and refine basic focus group methods. No member of the pilot focus groups had been a trainee at SAH and none were participants in the main research.

3.B.2 Focus Group Interviews—Data Collection

The topics explored in these interviews included (see summary questions Appendix 3.B.2, 244):

- ☐ Overall enjoyment and value.
- ☐ Seriousness of tension and conflict and the issues around which this conflict revolved
- ☐ Personality assessment profiles (primarily DiSC and MBTI at this stage) ⁶²
- ☐ Individual course modules
- ☐ Aspects of living together, duties, meals, recreation
- ☐ Role of cohort rituals, jokes etc.
- ☐ How might they have learnt from each other
- ☐ Social facilitation – awareness of any impact on their performance due to the presence of others and, if so, whether it improved or diminished their performance (Gilovich et al. 2013, 456).
- ☐ Awareness of any particularly emotional responses that might be an indicator of the kind of disorienting dilemma that is often taken to start the transformative learning process identified by Mezirow. (There was very little indication that participants experienced or were aware of instances of such learning nor that they conceived of their learning in such terms.)

⁶² Various psychometric instruments have been administered over time, possibly using popularised versions, or more formally with an accredited tester. “Everything DiSC® Workplace” appears to have been used since about 2009, published by Inscape Publishing until about 2012 and from 2013 onwards by John Wiley & Sons, Inc. In earlier years, pre-2008, it seems that the Myers-Briggs Type Indicator (MBTI) was used but it is not known exactly which psychometric instrument was used.

- ☐ Diversity – what kinds of diversity they noticed, and what kinds helped or hindered their experience at SAH.

3.B.3 Staff Interviews—Data Collection

Interviews were also conducted with the current principal and another senior staff member, as a form of triangulation. The data from these interviews were added to the analysis and provided some important insights into the intent of the course structure.

Interviews with another two former staff members were conducted after the Phase 1 analysis had been completed. These interviews were not transcribed and have been treated as background information for the researcher.

Topics covered in staff interviews included (see Appendix 3.B.3, 245):

- ☐ Staff expectations for the course
- ☐ Importance of tension and conflict
- ☐ Prevalence of the relational content in the formal curriculum
- ☐ Theorists that drive their pedagogy/andragogy.
- ☐ Ways in which they intentionally create community (*‘communitas’*)

3.B.4 Timetable Analysis—Data Collection

The researcher collected timetables available from the last twenty training cohorts. None were available pre-2008. These were analysed with training modules and other scheduled activities provisionally categorised by title into the three dimensions of Instrumental Learning (IL), Communicative Learning (CL), and Reflective Learning (RL). The amount of time in each dimension was estimated roughly, and some modules and activities were allocated to other activities such as holidays, administration, or organisational meetings. This rough categorisation was then checked with staff.

3.B.5 Post Interview Processing

Recorded interviews were transcribed by the researcher and transcripts provided to those interviewees who had indicated they would like a copy for checking. A few minor corrections were made and one comment was revised at the request of the participant. Transcripts were anonymised before analysis.

Qualitative analysis of the resulting text was carried out using the software, RQDA (Huang 2018). Transcripts were read seeking recurrent words and concepts that might relate to the different types of learning. The text was tagged with these concepts. A list of about 100 concepts arose and areas of overlap between tags were studied. Where an instance of growth or learning was noted, it was tentatively assigned to one of the three dimensions and tagged with the setting in which this learning might have arisen.

This analysis was then used in the preparation of the survey instrument with those areas which appeared important shaped into questions to be investigated quantitatively. Some potential avenues of enquiry were dropped when the focus group stage suggested little evidence would exist in that area or that the memory of participants was unlikely to be a reliable measure of the relevant issue.

3.C Phase 2 Survey—Methods

The second phase concerned the preparation and administration of an online survey to which 229 former trainees were invited to respond.

3.C.1 Survey—Delimited Population and Sampling

The quantitative slant of this phase called for both high response rates and a broad range of experiences. Taking into consideration that the total population of former trainee participants might be of the order of 200 – 300, and estimating that a response rate of 40-60% seemed achievable, it was decided to aim for 100-150 responses covering an extended period including those who trained before 2008 but focusing on the last 10 years.

The delimitation for sampling in the survey was chosen as: Those who had completed the SAH course and were either current long-term cross-cultural workers with the organisation or who had resigned within the last 5 years. This delimitation intentionally excluded current trainees, in accordance with the ethical decision made above. The uncommon cases of those who completed at least part of the course but did not proceed to long-term missionary service, often for undisclosed reasons, were also excluded as potentially confounding. The delimitation criteria also excluded non-organisational trainees to limit their potentially confounding effects. However it is noted that this limits the transferability of the results.

It was then calculated that approximately 240 course completions fit the delimitation above. Within these course completions 12 (~5%) represented a second attendance by the same person, and these individuals were asked to choose one course for reporting and add comments regarding their other attendance as appropriate.

Invitations were sent to 161 current workers and 68 who had resigned since the beginning of 2014, for a total of 229 potential respondents. Responses were received from 125 respondents, of whom 95 were current workers at the time of the questionnaire and 30 had already resigned. Thus there was a slightly higher return rate from current (59%) than from resigned (44%) missionaries. For this kind of survey, the response rate was considered to be very good and similar to the response rates obtained by Smith and Bath (C. D. Smith and Bath 2006).

The sample group (n=125) consisted of 73 females and 52 males. Family status at the time of training was: 22 single; 26 married without children; and 77 married with children. Statistical tests of the sample showed very good representation from the population, referenced against N=691 trainees of CMS-A from 1975-2018:

- Gender - $\chi^2(1, n = 125) = 0.004, p = 0.95$;
- Family Status - $\chi^2(2, n = 125) = 1.229, p = 0.541$;
- Age - sample population M=37.5, SD=9.5 vs population mean M=37.3, SD=10.2.

- Branch representation also showed very good representation -

$$\chi^2(5, n = 125) = 0.70524, p = 0.98.$$

The resultant sampling method most closely fits convenience sampling. The researcher, aware of the potential for volunteer bias—that those who had better experiences might be more motivated to participate—made efforts in general communications to encourage those who had had more negative experiences to also complete the survey. In this context, the demographic checks are somewhat of an endorsement that no obvious segment was missing.

Another important demographic split is the year 2008 when the course was restructured in important ways: the course was shortened to fit in 5 months allowing 2 semesters and smaller cohort sizes, there was a change of principal and title, and the formal role of mentor was introduced. A split variable was created marking those who trained in 2008 or later as Post2008=TRUE/1 (n=81) and those who trained in 2007 or before with value of Post2008=FALSE/0 (n=44).

3.C.2 Survey—Preparation

The areas of interest identified from the focus group interviews (see 3.B.1, 82) were used as the primary guide in designing questions. Various existing survey question banks used in educational research were also considered; however, most were rejected as inappropriate (see commented list in Appendix 3.C.1, 247). The general ideas of some of the graduate skills surveys were used, for example determining overall course experience, though the setting was sufficiently different that new questions were required. The Learning Community Scale (LCS) (C. D. Smith and Bath 2006) was used with only slight wording changes but supplemented with questions more appropriate to the sustained close contact in the residential setting.

The full Modes of Relationship Questionnaire (MORQ) could not be included as the usual protocols require each participant to complete a minimum of 200 questions, a set of 20-52 questions about relationships with each of 10 people (Caralis and Haslam 2004, 3; Haslam and Fiske 1999, 244). However, given the potential educational importance of relationships between staff and trainees and between

fellow trainees, it was decided to attempt a very crude version with 8 questions (four questions about relationships with staff and the same questions about relationships with other trainees).

The majority of the survey collected responses to Likert-scale and check-box questions arranged in banks of question items. Text response questions were included with each bank to allow respondents to add further comments. Other text response items were included to gather qualitative data and so enhance the picture obtained from quantitative data.

The final survey instrument was refined with the aim that it might be completed online in about 30-45 minutes. The survey was set up in Google Forms and consisted of 22 web-pages including 3 branching pages. A complete response required the participant to complete only 19 primary pages. One pair of pages (17 and 18) was customised for Singles or Marrieds but the other 18 primary pages were seen in the same order by all respondents. All main question banks appeared in the same order and were required to be completed, although N/A ('not applicable') was included as an option for several scales. The final survey is shown in Appendix 3.C.2 (251).

3.C.3 Survey—Instrument Summary

A summary of the content and flow of the final survey instrument is provided in table 3.4 (88).

Table 3.4. Summary of Survey Instrument

Page	Page Heading (Prefix code)	Description
1	Personal Invitation Code (PIC)	1x Text question: A filter so that only those with a matching Personalised Invitation Code (PIC) could participate or read the rest of the survey
2	SAH – Research Information Page	Information about the research. 1x Multiple Choice question to either: continue; request an edit link; or, not continue at this time.

Page	Page Heading (Prefix code)	Description
3	Basic ID info (BID)	7x Text questions: Year of attendance; semester; gender; initials; length of course; number of weeks completed; clarifying comments
4	Your friendships with FELLOW TRAINEES (FFT)	6x Text questions: Total adults in the course; number of adults remembered; number of close friends from that course: before the course began; at the end of the course; and now. Included as indicators that relationships had formed with fellow trainees.
5	Overall Course Experience (OCE)	15x Likert-Scale questions in 3 banks about the overall course experience (OCE1, OCE2, OCE3); 3x Text questions about helpful, unhelpful elements about the course and a comment.
6	Areas of growth in learning (AGL)	15x Likert-Scale questions in 2 sets (AGL1) (1x question was repeated) about how much they perceived they grew in different aspects of learning. 15x matching Multiple Choice questions (AGL-Inf) identifying the most significant of 6 influences to each aspect of learning. 6x Text questions to elaborate on each of these influences. 1x Text question for a topic researched by the respondent for an assignment at SAH. Included as the basic dependent variable and the way to compare influence of trainees with other sources.
7	SAH Evaluation (HLG)	37x Likert-scale questions (HLG) about different course elements arranged in 3 sets with a matching text question for comments on each set. 1x Likert-scale question indicating the difficulty of living in community (LIC). (These questions were adapted from various internal evaluations given during the course and included as a potential test-retest check.)
8	Community at SAH (LC)	12x Likert-Scale questions (LCS+LCD) about the experience of the learning community. 1x Text question for comments. Included from literature review discussion.

Page	Page Heading (Prefix code)	Description
9	Relationships with STAFF (MORS)	4x Likert-Scale questions about the perceived mode of relationships between staff and trainees (MORS). Included from literature review discussion.
10	Relationships with FELLOW TRAINEES (MORT)	4x Likert-Scale questions about the perceived mode of relationships between trainees (MORT). Included from literature review discussion.
11	Tension and Conflict (TAC)	20x Likert-Scale questions about potential areas of tension and conflict (TAC1). 5x Likert-Scale questions about the experience of tension and conflict (TAC2). 1x Text question for comments. Included from interview sources.
12	Understanding yourself and others (PP)	2x Text questions requesting results from simple psychometric tests possibly done while at SAH: TKI - Conflict management style; DiSC; MBTI. 1x Text question asking for perceptions about the usefulness of such tests and comments. Included from interview discussions.
13	Post SAH connection (PostSAH)	12x Multiple-Choice questions in 2 banks (PostSAH) about the frequency of contact with cohort members since completing and modes of communication. 1x Text question for comments. Included to measure ongoing relationships.
14	Communities of Practice (COP)	3x Multiple-Choice questions. 1x Likert-scale question about experience and interesting in communities of practice (COP). 1x Text question for comments. Included from discussions with staff about ongoing development.
15	Preparation options (SAHAdvice)	1x Likert-Scale question about how much of the course should be completed. 4x Text questions about responses they'd give to people who wanted to avoid various aspects of the course. Included to expand on interview responses.

Page	Page Heading (Prefix code)	Description
16	Family life (MaritalStatus)	1x Multiple Choice question about marital status – used to branch between page 17 (Single) or 18 (Married)
17	Single (SingleAdvice)	4x Text questions asking advice that would be given to those coming to SAH Opportunity to give advice to others.
18	Married (MarriedChildren and MarriedAdvice)	2x Text questions about number and ages of children. 4x Text questions asking advice that would be given to those coming to SAH (Same as page 17 with slight rewording). Included to check family status and as above to give advice.
19	Prior Experiences (PY)	4x Text questions asking the number of years previously spent in communal living, tertiary education, theological education, secular employment and ministry employment. Included as possible sources of diversity in experience.
20	FINAL SURVEY SUBMISSION (Survey Comments)	Reminder of actions recommended for serious concerns, implied consent and 3 additional explicit consent options (to quote, and consult some specific records). 1x Multiple Choice for time spent on the survey. 2x Multiple Choice - whether they wished to receive a summary of their own answers and a copy of the final report. 2x Text questions for Email address and final comments.
21	Not completing?	Only seen by those who chose not to complete the survey on page 2
22	Re-sent EDIT link?	Only seen by those who selected this option on page 2

3.C.4 Survey—Administration

A personalised invitation code (PIC) was provided in an invitation email (Appendix 3.C.3, 276) sent by the researcher directly to potential respondents and was required to be entered on the first page of the Google Form to move beyond that page. A link in that email also pre-filled a number of non-identifying demographic fields in the survey for convenience.

Advice of the survey was noted in two monthly general organisational emails sent to current workers only (Appendix 3.C.4, 277 and Appendix 3.C.5, 277). After one month 67 responses had been received and a reminder email was sent to those who had not already responded. The survey was closed after 2 months with 125 valid responses.

3.C.5 Data Cleaning

Responses were downloaded into a spreadsheet for initial processing and analysis. These responses were examined and some data cleaning performed, such as re-coding numerical values in place of numbers written in full. Most question responses were in the form of Likert scales which were coded numerically and with some scales reverse coded at this point.

The quantitative data containing over 200 variables was imported to R (R Core Team 2019) for further analysis and reporting. A list of R-packages used in the quantitative analysis is provided in appendix Appendix 3.D.1.f (281).

3.C.6 Other Sources of Data

Demographic data was collected separately from organisational records for cohorts and as many past trainees as was practical. This allowed for the calculation of sampling rates and confirmation that the survey responses were representative.

3.C.7 Collecting Question Sets

As noted above, the survey asked questions in item sets grouped in pages. Some main item sets were collected and examined and appropriate descriptive statistics calculated (e.g. Sample Size, Mean, Standard Deviation, Median, Min, Max, Quartiles, Skew, Kurtosis, Shapiro-Wilks test). The following item sets were collected for analysis (with assigned codes for later reference):

- ☐ Overall Course Experience – (OCE1 + OCE2 + OCE3)
- ☐ Areas of Growth and Learning - (AGL1 + AGL-Inf)
- ☐ Helps to Learning and Growth – (HLG + LIC_Difficulty)
- ☐ Learning Community - (LCS + LCD)
- ☐ Modes of Relationship - (MORS + MORT)
- ☐ Areas of Tension and Conflict - (TAC1) – This set was later reverse coded so that low scores indicated tension and conflict whereas high scores indicated harmony.
- ☐ Attitudes to Tension and Conflict – (TAC2)
- ☐ Friendships amongst Fellow Trainees – (FFT)
- ☐ Personality Profiles – (PP)
- ☐ Post SAH interactions - (PostSAH)
- ☐ Communities of Practice - (COP)
- ☐ Basic Identification and Demographic information – (BID)

3.C.8 Qualitative Data Analysis

The 33 optional text response questions in the survey were read by the researcher and mainly used to confirm that respondents had understood the intent of the question. Some comments were selected to illustrate typical responses.

Elementary qualitative data analysis was performed on the six questions associated with the six influences in the analysis of Areas of Growth and Learning using RQDA (Huang 2018). The basic sentiment of the comment was classified into one of four categories: *Positive*; *Neutral/Mixed*; *Negative*; or *Null/Don't Remember*.

A similar analysis was performed on four questions asking what advice might be given to someone who might want to: avoid the course; study the course part-time; do the course but live off-site; or do the course online. The basic sentiment of each comment was coded as *Positive*, *Negative*, or *Mixed/Neutral*, and the results tallied. There was no need for a *Null* category for this set as all questions were answered.

3.D Phase 3 Survey Analysis—Methods

Phase 3 of this study, divided into four tasks, concentrated on more complex analyses of the survey data primarily considering correlations between various questions, both within and across question sets. The first three of these tasks were together concerned with the first three research sub-questions (SQ1, SQ2, and SQ3), concentrating on experiences during training.

In Task 1 a Confirmatory Factor Analysis (CFA) was performed to validate a three-dimensional model of growth and learning based on the discussion in section 2.G.1 (53). In Task 2 this model was used as a framework for estimating measures for the contributions and biases of various influences on growth and learning on these three dimensions. Task 3 explored correlations between primary measures of growth and learning and the other question sets particularly focusing on the ways in which fellow trainees might affect various aspects of growth and learning.⁶³

Finally, Task 4 analysed evidence of continuing contact and reported close friendships from cohorts against elapsed time and similar patterns of post-course

⁶³ Much of the analysis in Phase 3 depends upon correlations between variables. An introductory correlation matrix analysis using a smaller data set concerning Modes of Relationship is presented in Appendix 3.D.4.b.

contact to provide some background for recommendations on the facilitation of communities of practice.

These tasks are presented in table 3.5 (95) below with the methods and data sets employed.

Table 3.5. Summary of Phase 3 Analysis Tasks

Phase 3 – Survey Analysis - Tasks

Task	Aim	Method	Dataset(s) Used
Task 1 – Quant	Obtain evidence for 3 dimensions of learning (CL,RL,IL)	Structural Equation Model tested with CFA	AGL1 (n=125)
Task 2 - Quant	Estimate contributions and biases of influences on areas of growth and learning	Calculate biases and contributions of various influences.	AGL-Influences (n=125)
Task 3a – Quant	Explore ways in which trainees might be contributing to Areas of Growth and Learning through difference aspects of the course	Inspection of correlations between scales	AGL- 3 factors OCE1 + OCE3 LCS + LCD MORS + MORT TAC1+TAC2 (n=125)
Task 3b – Qual	Confirm quantitative findings and Illustrate observations with survey comments from respondents	RQDA analysis of comments.	Survey comments relating to AGL-Influences, and throughout.
Task 4 – Quant	Explore evidence of post-course trainee relationships influence on growth and learning.	Raw responses, calculations of persistence of close friendships, continued contact	FFT PostSAH (n=125)

3.D.1 Advanced Data Preparation

For most of this study, exploring general educational concepts, it was useful to consider the full sample (n=125). A small number of multivariate outliers were

identified by Mahalanobis distance. The main question set for further analysis, AGL1, had seven cases above the threshold criterion. Three of these cases were also identified as outliers in other question sets too. These cases were assessed and considered to represent real but unusual responses. Comparative analysis for Tasks 1 and 2 was done with and without these cases without major changes and it was decided not to remove them.

In various places the data-set was split into sub-samples, for example to examine sensitivity to demographic variables (Gender, Marital Status, Children, Cohort of Attendance, Branch of origin etc.). Common descriptive statistical measures were calculated for individual items and data sets. Virtually no variable or scale met standard criteria for normality or variance so robust methods were used where available. Where scales were constructed from subsets of data, internal reliability was calculated and question items considered for elimination as appropriate using Cronbach's alpha (Cronbach 1951). A more technical discussion of these steps is available in Appendix 3.D.1 (278).

3.D.2 Task 1—Model for Dimensions of Growth and Learning

Task 1 aimed to confirm the underlying theory of three dimensions of learning, exploring the feasibility of factoring three dimensions of growth and learning, and to identify relevant questions for each dimension. One question set from the Phase 2 survey was used as a measure of learning, Areas of Growth and Learning (AGL1) and all respondents were used (n=125). These questions are produced here:

Please indicate how much you agree. "SAH was helpful for my learning/growth in ..."

- ☐ understanding Bible and Theology
- ☐ understanding cultures, religions and mission
- ☐ learning about my intended location (politics, history)
- ☐ understanding the organisation
- ☐ developing practical skills (health, security, 4WD etc.)

- ☐ pursuing research interests
- ☐ relating cross-culturally
- ☐ developing skills in conflict resolution
- ☐ preparing to learn language
- ☐ managing family transitions
- ☐ understanding how I relate to others
- ☐ understanding myself and personality preferences
- ☐ strengthening good habits and spiritual disciplines
- ☐ deepening my relationship with God
- ☐ taking care of myself

The Spearman rank correlation matrix for AGL1 data was prepared and examined in two forms, numerical and graphical. It was confirmed that there were a large number of correlations over a range with no correlations high enough to indicate two items were collinear ($\rho > 0.9$) and no factors completely uncorrelated ($\rho < 0.1$) to any other factor⁶⁴. A graphical summary is presented in figure 3.3 (98), with correlation cells marked with an X where the correlation tested insignificant at the indicated p-level of 0.001. The numerical form of the correlation matrix is given in appendix table 4.16 (315). All correlations were noted to be positive, indicating that perceived learning in all areas generally tended to rise and fall together.

⁶⁴ Using Spearman's rank correlation coefficient, ρ .

Spearman Cor matrix for: Areas of Growth and Learning (AGL1)
(n=125, q=15, M=0.37, SD=0.12, X=insig @ p-value=0.001)

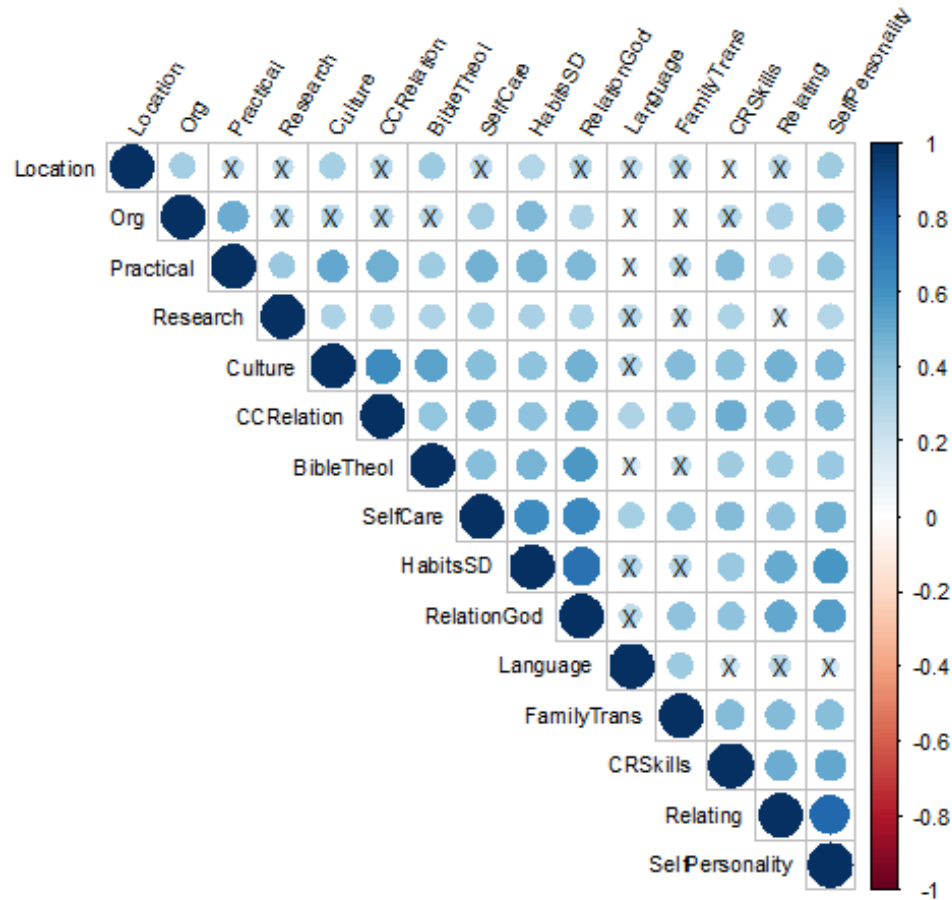


Figure 3.3. Areas of Growth and Learning (AGL1) - Intra-Scale Correlations

An initial theoretical model (labelled A.CRI1) was proposed assigning each of the 15 items to one of three proposed latent factors representing the three dimensions: Communicative Learning (CL), Reflective Learning (RL), or Instrumental Learning (IL). This initial model was coded as a ‘lavaan’⁶⁵ model and subjected to Confirmatory Factor Analysis (CFA). A process of model generation (Kline 2011; 2016) was followed in which the model was adjusted over five major steps and then a choice made as to the preferred model for general use. The preferred model was compared to several standard variants (orthogonal, collapsed, nested/2nd order, and essentially-tau-equivalent), as well as to several alternative models (various numbers

⁶⁵ The R package abbreviation ‘lavaan’ or ‘Latent Variable Analysis’ was used for CFA and SEM analysis.

and groupings of items into factors). Further information on methods used for the CFA model development can be found in Appendix 3.D.2 (283), including the Fit Measures used to evaluation models (Appendix 3.D.2.a, 283), the initial models tested (Appendix 3.D.2.b, 285), and the model refinement steps followed (Appendix 3.D.2.c, 285).

3.D.3 Task 2—Estimation of Influences

The second Phase 3 task aimed to estimate the relative contribution of fellow trainees among six influences on learning at SAH for each of the three dimensions: Instrumental Learning (IL); Communicative Learning (CL); and Reflective Learning (RL). Both the relative contributions and biases of these influences were estimated.

The data used for Task 2 was a set of 15 questions (AGL-Inf) matching the items of AGL1 used previously in Task 1. The question read: “For each of the following rows (same as above), please select the most important influences (up to 3 columns). . .” followed by the particular area, for example, “deepening my relationship with God”. The following choices of influences were available:

- ☐ Teaching Staff
- ☐ Mentor
- ☐ Fellow Trainees
- ☐ People outside the SAH community
- ☐ Personal research (study/books)
- ☐ Self-Reflection
- ☐ N/A.

The various Focus Group interviews in Phase 1 had indicated influences that might be important in the growth and learning of trainees and this list of influences was chosen as a reasonably minimal set reflecting the particular learning setting of SAH.

The AGL-Inf dataset was examined to confirm that respondents had largely kept to the instructions of selecting up to 3 influences and that N/A (Not Applicable) was only selected when no other influences had been selected. After examination it was decided that those cases where 4 influences had been named were relatively few and could be included without significant bias.

The data for this task was treated as a set of multiple response categorical variables (MRCV), since the same individual could provide multiple responses to each question and the same individual responded to multiple questions. For such variables simple chi-squared analysis can be precarious, as it is easy to violate key assumptions of independence, normality, and, inclusion of non-occurrences. There are two main approaches used for this kind of data: *marginal models* in which modified forms of summary contingency tables are analysed using chi-squared tests; and *generalised linear mixed models* (GLMM) in which subject-specific data is taken into consideration and included in forms of regression models (Suesse and Liu 2013). Both these methods were used in different parts of the analysis.

3.D.3.a Estimates of Influence Contribution

A simpler method at the heart of marginal methods was used to estimate the percentage contributions of each influence to each dimension. Each mention of an influence in a question response was divided by the number of influences mentioned by the participant to that question. These scaled responses were summed over the questions within each dimension, divided by the number of participants, and divided by the number of questions within the dimension to obtain the probabilities of mention. With this method, the contributions from influences in each dimension added to 100%. Bootstrap methods were also used to calculate confidence intervals.

3.D.3.b Exploration of Influence Bias and Demographic Effects

In the second part of this exploration of influences GLMM methods were used to identify where the contributions of influences were significantly biased across the dimensions. These methods were also used to explore the effects of various demographic variables.

For each of the six influences, four binomial family models were fitted: a baseline version without the dimensions considered, and three versions including the

dimensions of growth and learning (DGL) together with combinations of demographic variables as “fixed effects” and with participant and question as “random effects” (cf. Roche et al. 2018, 5). These models considered the following variables: Dimension of Growth and Learning (DGL); Age, particularly the interaction of Age with DGL; Post2008; Gender; Married; Children; and Perinatal.

Model outputs were tested to determine if bias across dimensions was significant and whether there were significant differences for the various demographic variables. Post-hoc tests of significance were compensated using Tukey adjustment to *p.values*.

A more detailed description of the models is provided in Appendix 3.D.3.a (290).

3.D.3.c Analysis of Comments for AGL-Influences

The quantitative data was supplemented by a check of the comments respondents added for each of the influences. The comments were labelled with the basic sentiment as: *Positive*, *Neutral/Mixed*, *Negative*, or *Null/Don't Remember*. Some basic analysis of the content was also conducted to identify the types of learning that might apply in each dimension.

3.D.4 Task 3—Other Evidence of Trainee Influence

Task 3 continued the exploration of how a trainee's growth and learning is affected by fellow-trainees during the course considering other quantitative and qualitative evidence from the survey. Only a limited investigation of the data was possible in this study so the analysis in this task was cursory. The bulk of analysis in this task thus considered bulk quantitative data and made initial observations without proceeding to detailed statistical testing.

The presence of intra-cohort relationships of some form could be assumed from the close contact and the environment where it would be very difficult to avoid interactions. A more objective measure was also calculated as the ratio of close friendships at the end of the course to the total number of adults in the course (FFT_CFEP). This measure was then used in correlations to serve as a measure of ‘intra-cohort relationships’.

3.D.4.a Correlations between Scales

Quantitative examinations concentrated on correlations between the question set already used as the outcome measure for learning in the three dimensions, Areas of Growth and Learning (AGL1), and four additional question sets which might be related in some way to that learning: Overall Course Experience (OCE1 and OCE3); Learning Community (LCS and LCD); Modes of Relationship (MORS and MORT); and Areas of Tension and Conflict (TAC1 and TAC2). Inter-correlations between these scales were also examined, mainly with simple summed scores for each set (more details can be found in Appendix 3.D.4, 292). Correlations between some other question items in the survey data, such as self-reported personality profiles (PP), were also explored for interest and are reported in results.

3.D.4.b Exploration of Tension and Conflict (TAC1 and TAC2)

Since Tension and Conflict were frequently mentioned in phase 1 research, both in focus group and in staff interviews, some particular exploration seemed warranted. The two sets of questions in this area comprised: TAC1, a set of questions asking for the level of Tension and Conflict experienced in twenty different issue areas; and TAC2, a set of five questions exploring beliefs about the prevalence and importance of Tension and Conflict in the course.

Two further analytical steps were taken. First, the pattern of intra-set correlations suggested an exploratory factor analysis (EFA) of the main Tension and Conflict set (TAC1) and this was investigated with models including between two and six factors. Second, further analysis was done to check correlations between the most significant level of Tension and Conflict experienced across all areas (TAC1) and beliefs about Tension and Conflict (TAC2).

3.D.5 Task 4—Continued Contact

The fourth task turned to the final research question (SQ4) concerning the impact of these cohort relationships on ongoing learning. Aside from the raw results on continued contact and communities of practice, evidence was sought of the persistence of relationships in general, the kind of content discussed in interactions,

and instances of membership in what might be essentially Communities of Practice (COP).

Two main forms of quantitative evidence for the persistence of relationships were collected in the survey. These included:

- ☐ Mentions of the number of close friends: before the course, at the end of the course, and at present.
- ☐ Frequency of contact with other members of the cohort, on what topics, and over what forms of media.

3.D.5.a Close Friendships—Formation

Respondents were asked to nominate the number of fellow trainees they would describe as close friends at three points in time: beginning of the course, end of the course, and now. These were converted into proportions of the total adults in the course and plotted over time.

Friendships acquired during the course were calculated and compared across various demographic variables of interest including: Gender, Family status, psychometric profiles, and courses pre-2008 vs post-2008. Some examination of these friendship acquisition were compared across demographic variables and psychometric preferences with means compared using unpaired two-sample Wilcoxon tests to check for significant differences.

3.D.5.b Close Friendships—Decay

The availability of data on close friends retained from 36 cohorts spanning several decades provides the opportunity for a very basic examination of relationships decay over time. Attempts were made to fit three model types, namely, linear straight-line decay, logarithmic decay (Appendix 3.D.5.b, 296), and power-law decay (Appendix 3.D.5.c, 296).

3.D.5.c Continued Contact—Decay

A second way to explore relationship decay arises from examining the pattern of reported regularity of contacts. Respondents were asked about their frequency of

contact with others trainees from their cohort in the years after the course, over six different topic areas (news about the family; news about work; sharing of resources; personal accountability; personal emotional support; or some other topic), and over seven categories of media (face-to-face; video or audio link – such as Skype etc.; text chat applications; general social media; email; reading newsletters; or some other). The scale of frequency of contact was selected to be roughly logarithmic (weekly, monthly, quarterly, yearly, 3-yearly, or less often). These rates of contact were also plotted by years elapsed and various models fitted.

3.E Summary of Methods

This chapter has presented the research questions, the framework, and the methodology used in this research study. The research questions focused on exploring the importance to growth and learning of fellow trainees across the three dimensions of instrumental, communicative, and reflective learning both during the course and afterwards. A three phase mixed methods framework was used in an exploratory sequential design. The methods used included focus group interviews, an online survey, and analysis of both quantitative and qualitative responses.

The next chapter presents results of the investigation arranged in the same order of three phases used in this chapter.

CHAPTER 4

RESULTS

This chapter presents the results of the study arranged according to the three phases outlined in the previous chapter: first, interviews with focus groups and staff members; second, results of the survey; and third, results from deeper statistical analysis including correlations between variables, models and other calculated parameters.

4.A Phase 1 Interviews—Results

Data was collected in two ways: semi-structured interviews with focus groups of former trainees, and individual interviews with current staff. These results were used as the primary guide in designing questions used in the phase 2 survey.

4.A.1 Focus Groups—Results of Initial Qualitative Analysis

The initial focus group interviews with former trainees provided the following insights (selected focus group responses can be found in Appendix 4.A.1, 297):

- The importance of staff-to-trainee relationships (STR), while not the focus of the study, are clearly important to learning and growth and likely the major influence.
- Tension and conflict were found likely to be a significant factor in the experiences of the cohorts. The experience of various participants noted such conflict, either with other trainees or with staff. One participant in the focus groups noted that this training had been a very difficult time for her and she recounted that her idealised impressions of Christian community had been eroded. However, during the interview the realization came to her that this was indeed how their ministry experience overseas had turned out, in a church with some very difficult relationships. Thus she was able to reflect back and note how, in a way, God had been preparing her to better handle that difficult ministry situation.

- Trainees tended to unite in some of the difficulties of their experiences in what might be called a *common bond of shared suffering* (CBOSS).
- It was noted repeatedly that the course had changed in some major ways since 2008, suggesting a potentially useful sub-grouping.
- Some respondents were conscious of both individual and organisational scrutiny during their time in the community. This suggests that it might be worth exploring the balance between training and assessment.
- Whilst anecdotally there were indications that Mezirow's theory of Transformative Learning might be applicable, focused questions in the area did not produce evidence of people going through that process, for example there was little evidence of disorientating dilemmas or intense emotional responses.⁶⁶ So there was no obvious pathway to fruitful enquiry in this area. In particular, though people noted that at times they were emotional, this seemed to be more in line with particular inter-personal conflicts and not to any particular learning (aside from some admissions of genuine surprise at insensitivities of others and intensity of conflicts). This should not be taken as evidence against the concept of transformative learning but rather that the particular questions and methods employed were ambiguous indicators of such processes. Further inquiry would require more concentrated attention that would have been outside the scope and primary interest of this research project.
- Trainees were sometimes in positions to share knowledge from experience or research however this did not appear to be a prominent part of the course, either by design or experience. In general, trainees were not able to offer

⁶⁶ The example given above of the participant for whom training had been 'a very difficult time' clearly involved emotions at the time, however the processing and awareness does not appear to have occurred at that time of training. Whilst another kind of study may have been able to focus on eliciting such processing, perhaps by using longer personal interviews with participants, such an aim would appear irresponsible without robust emotional and psychological support structures in place. It was judged that if the questions in the focus group were not eliciting sufficient evidence of these transformations, then the proposed second phase using an online survey would be unsuccessful or would have to be very provocative and ethically questionable.

many examples of having learnt something directly from a fellow trainee. Although time and memory might account for this, it was unexpected and seemed worthy of some kind of quantitative investigation.

- No evidence was found to suggest that participants were aware of any social facilitation effect of any educational relevance (Gilovich et al. 2013, 456). Several potential explanations arise and a combination is likely: prior experience of presentations – by the time they begin, all course participants would have presented in larger groups; communal atmosphere – the cohort groups appeared to be close enough that impact of spectators is likely to be minimised; and, distance from the events – for many it was too far in the past to remember. It was concluded there was no point in investigating this further.
- It was noted that participants recalled personality profiling though not all remembered their own profile. Those who trained at different periods were apparently given different tools. This suggested that it was worth investigating the more common tools used, which appeared to be DiSC and MBTI.

4.A.2 Staff Interviews—Results of Initial Qualitative Analysis.

The initial interviews with two staff members are summarised in the following insights (selected staff interview responses can be found in Appendix 4.A.2, 301):

- Staff aim to foster the qualities of “reflective practitioners” (staff interview, 2017). They reference this as a philosophy situated in medical education and which has been intentionally appropriated in this setting. This suggested enquiry to differentiate the importance of personal research and self-reflection when compared to that of other influences.
- The staff recognize the diversity within their own team and the importance of that team modelling relationships of how to work together in the midst of that diversity including where this diversity includes deeply held opposing views. This suggested further enquiry into the nature of relationships as well as exploring conflict.

- The staff volunteered that they aim to create each cohort as “what [Victor] Turner called a *communitas*, a special community . . . hidden in . . . a liminal phase” (Staff interview). In this they are deliberately reducing power differences and in many ways ensuring that this is a safe place in which learning can occur. This appears to be a shift in position since 2008 with various measures reflecting the educational impact of this shift. These observations suggested further enquiries into the functioning of the learning community, power differences in relationships, and overall course experiences.
- Some of the ways in which the staff intentionally create a safe place including commitments given to trainees about confidentiality and transparency about what is passed on to others in the wider organisational selection processes. This suggested facets of the learning community that would be unusually deep when compared to an undergraduate university course.
- A key part of the training experience designed by the staff is an initial orientation period in the timetable of about two weeks in which each person on staff and each trainee shares their life story with staff modelling vulnerability. This again suggested enquiry into the importance of deeper learning community and the ways in which staff not only teach content but interact deeply in other dimensions of trainee growth and learning.
- Staff members noted that they not only regarded conflict as inevitable, but actively anticipated it and to some extent saw it as an essential part of the course experience. In mentoring relationships, one staff member in mentoring settings would ask trainees how they were experiencing conflict and encouraging them to pray that they would! The intentionally formative framework for such counter-intuitive advice is that if someone is unable to experience and resolve conflict in such a ‘safe’ environment, then one might rightly question their ability to successfully resolve such tensions in a higher stressed condition, in a more complex foreign culture, and often with language barriers. This suggested more extensive enquiries into the place of tension and conflict.

- Psychometric testing was also noted including both DiSC and the Thomas-Kilmann Inventory (TKI). This suggested specific questions might be asked about such tools and possibly assessing their value during the course, after the course, and correlations with other question areas.

4.A.3 Timetable Analysis—Results

It was clear from the timetable analysis that there were substantial parts of the formal curriculum in each dimension with this preliminary division suggested that roughly 50% of the course content might be effectively CL, 30% might be IL, 10% RL with the remainder being uncategorised (see Appendix 4.A.1, 297). In the researcher's experience, this would represent substantially more formal curriculum devoted to CL and RL than a typical course of theological study.

4.A.4 Phase 1 Summary

This section has briefly presented the initial findings from the phase 1 interviews. As noted in the methodology section, these findings were used to guide the preparation of the online survey, and they will also be included in the discussion chapter.

4.B Phase 2 Survey—Results

This section summarises the raw responses to questions in the survey. After presenting these basic results comments are made about differences across demographic splits.

Descriptive statistics are included in Appendix 4.B (308). (These become more relevant in the statistical analyses of the investigations in Phase 3).

4.B.1 Overall Course Experience (OCE)

Questions were asked in three sets (OCE1, OCE2, and OCE3). From an organisational perspective it is pleasing to see that most results are positive and that the vast majority of trainees recall their time favourably. These results also accord

with anecdotal evidence. The notable exception in the first set, OCE1 in figure 4.1 (110), is that more than half of respondents did not recall their time as “Easy.”

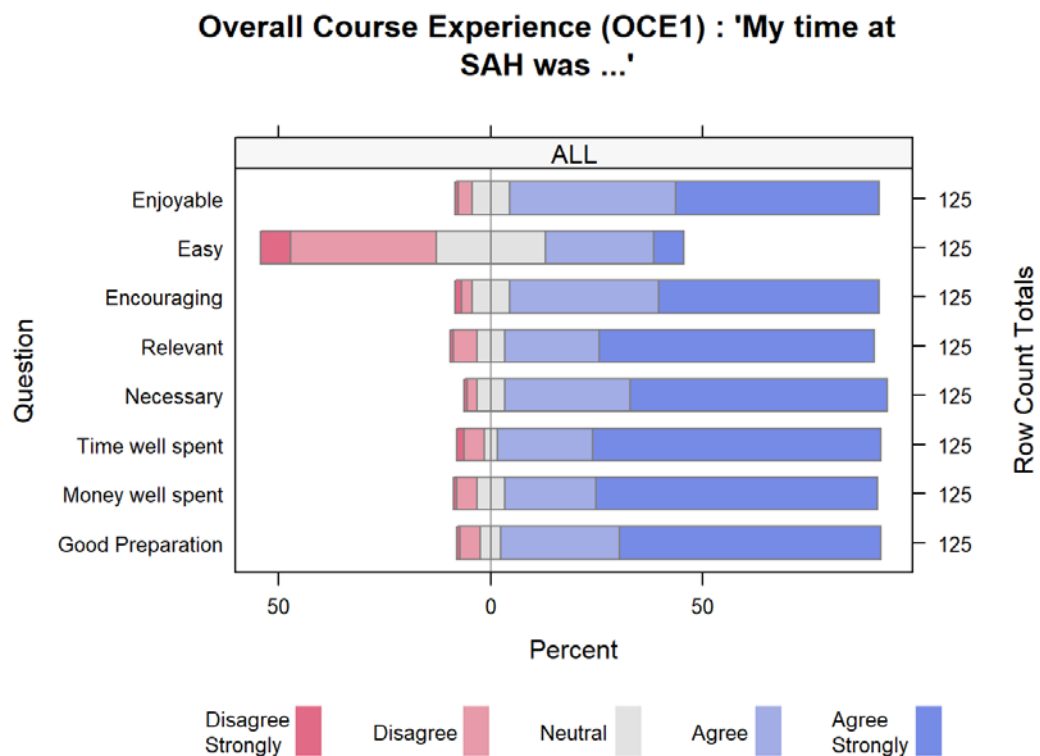


Figure 4.1. Overall Course Experience (OCE1)

The second set of responses, OCE2-a in figure 4.2 (111) and OCE2-b in figure 4.3 (111), considered two ways in which the balance of the course could be perceived. More than 60% of respondents perceived the balance was towards Training and Preparation with less than 10% thinking the balance was more heavily weighted towards its role in the organisation’s Assessment and Selection processes. The Pre2008/Post2008 split of the data (indicated in the figures as Post2008=FALSE and Post2008=TRUE respectively) showed a clear shift in this perceived balance towards Training and Preparation in the years since 2008.

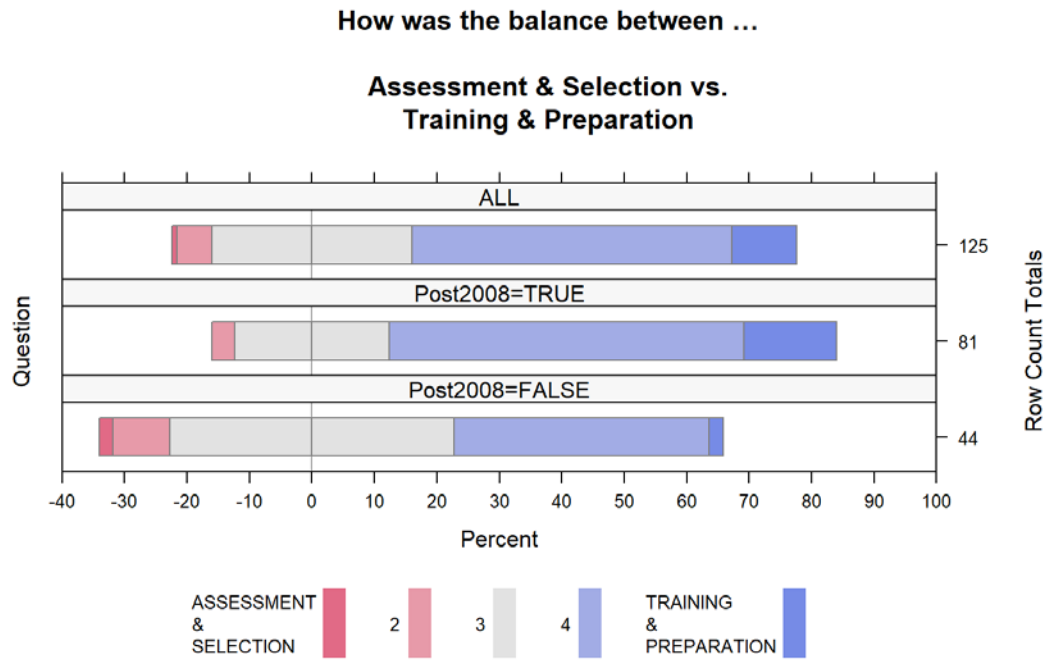


Figure 4.2. Overall Course Experience (OCE2-a) – Balance of Assessment and Selection vs Training and Preparation

The balance between fixed curriculum and addressing individual needs has moved towards the centre though is still perceived as slightly more fixed curriculum, as shown in OCE2-b in figure 4.3 (111).

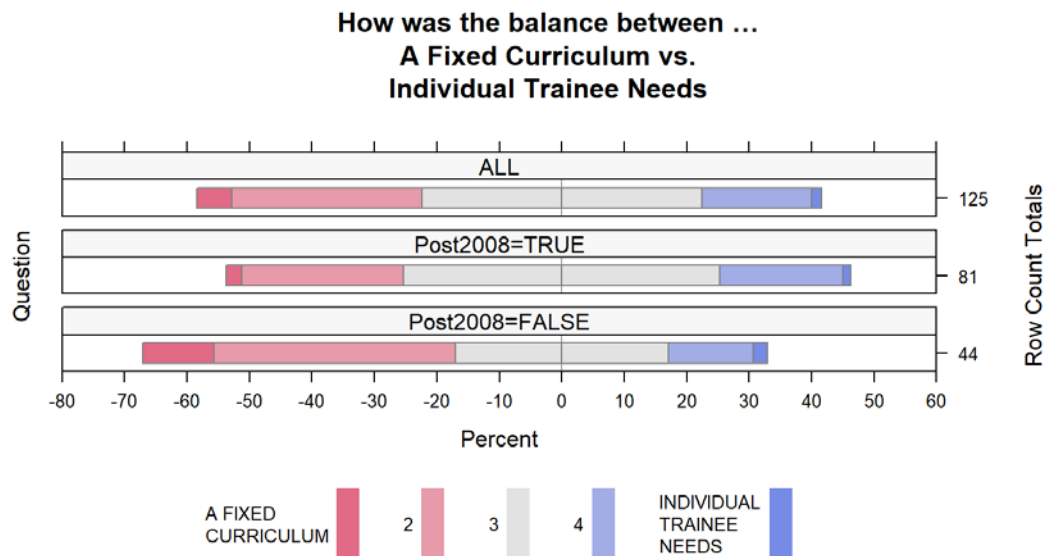


Figure 4.3. Overall Course Experience (OCE2-b) - Balance of Fixed Curriculum vs Individual Trainee Needs

The third set of questions in this section, OCE3 in figure 4.4 (112), considered the perceptions towards the institution and program. Overall responses were strongly positive.

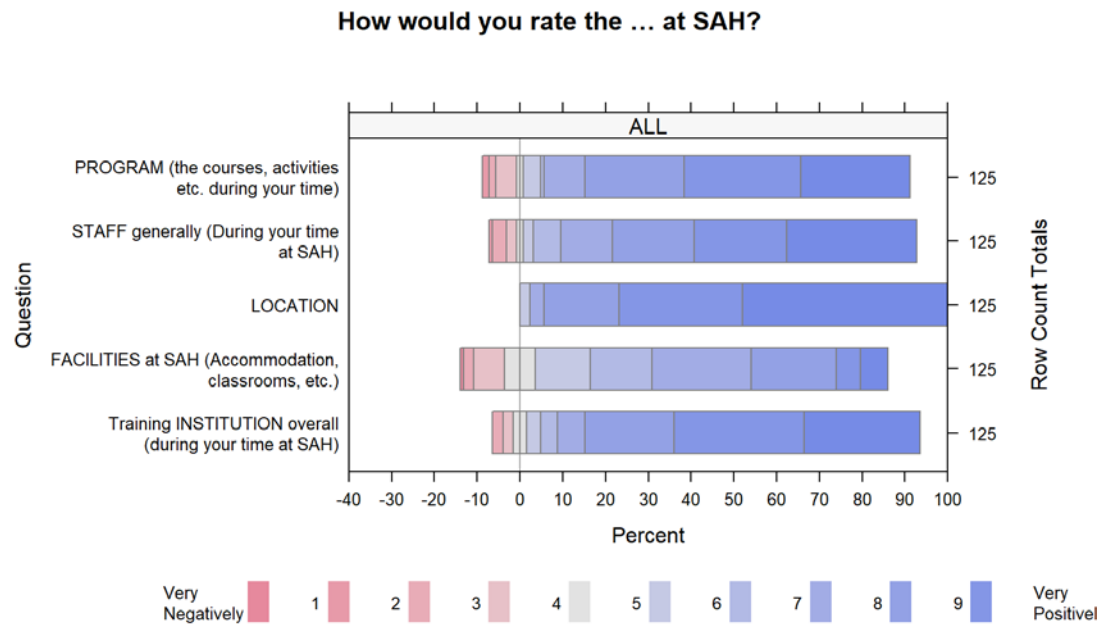


Figure 4.4. Overall Course Experience (OCE3) – Respondent ratings of aspects of the course

The institution, program, and staff, were all rated positively by more than 80% of respondents. Interestingly, the Location rated most highly and the Facilities, though apparently reasonably adequate, rated the lowest.⁶⁷ It is also interesting that, although SAH has remained at the same address, the mean rating of the Location increased over time (pre-2008 mean of 8.6 vs post-2008 mean of 9.4 out of 10).⁶⁸

⁶⁷ Whilst not a concern of this study, both of these suggest that, in the opinion of former trainees, the organisational decision to redevelop on site is endorsed.

⁶⁸ This might indicate a methodological source of bias from the recency of the experience, which admittedly could also be affecting other results. However it might just as easily be connected to other factors, such as the recent reputation as the world's most liveable city (Brandy August 14, 2018) or likely gentrification of the local area. Thus, the potential for bias at this point is noted but not considered significant enough to be explored in any further detail.

4.B.2 Areas of Growth and Learning (AGL)

The areas of growth in learning were intended to cover the kinds of learning that were noted from interviews and analysis of curriculum without focusing on particular course models. Two sets of questions were asked.

The first set of questions, AGL1 in figure 4.5 (113), asked respondents for their perception of growth and learning in various areas. Most respondents agreed that the course was helpful for their learning and growth in all these areas. This set of questions, AGL1, was taken as the primary measure of educational benefit and became central to the phase three analysis, particularly Tasks 1 and 2.

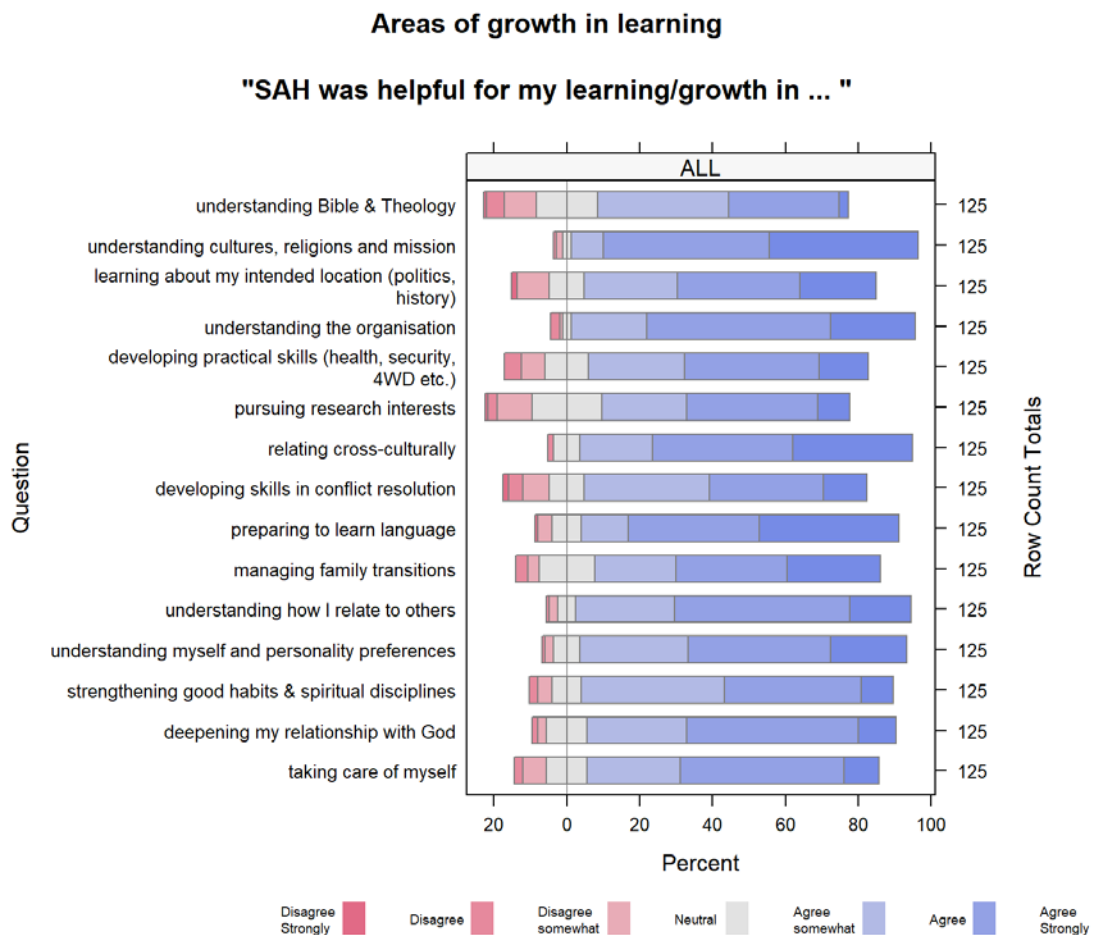


Figure 4.5. Areas of Growth and Learning (AGL1) – Respondent-reported learning

The second set of questions, AGL-Influences, matched the same areas of growth and learning as AGL1 but instead asked respondents to indicate the most important influences towards that area of growth and learning. “For each of the following rows

(same as above), please select the most important influences (up to 3 columns) . . .” for example, “deepening my relationship with God” with the following choices available: Teaching Staff; Mentor; Fellow Trainees; People outside the SAH community; Personal research (study/books); Self-Reflection; N/A.

A histogram of selected influences per question, figure 4.6 (114), shows about 40% chose only 1 influence and just under 30% chose 2 or 3 each. This averaged to 1.9 influences selected per question per respondent. A small number of question responses (14/1875~0.7%) with 4 influences selected were identified but considered unlikely to affect results so were retained. A relatively low rate of N/A selections was noted (88/1875~4.7%) with none in combination with another selection.

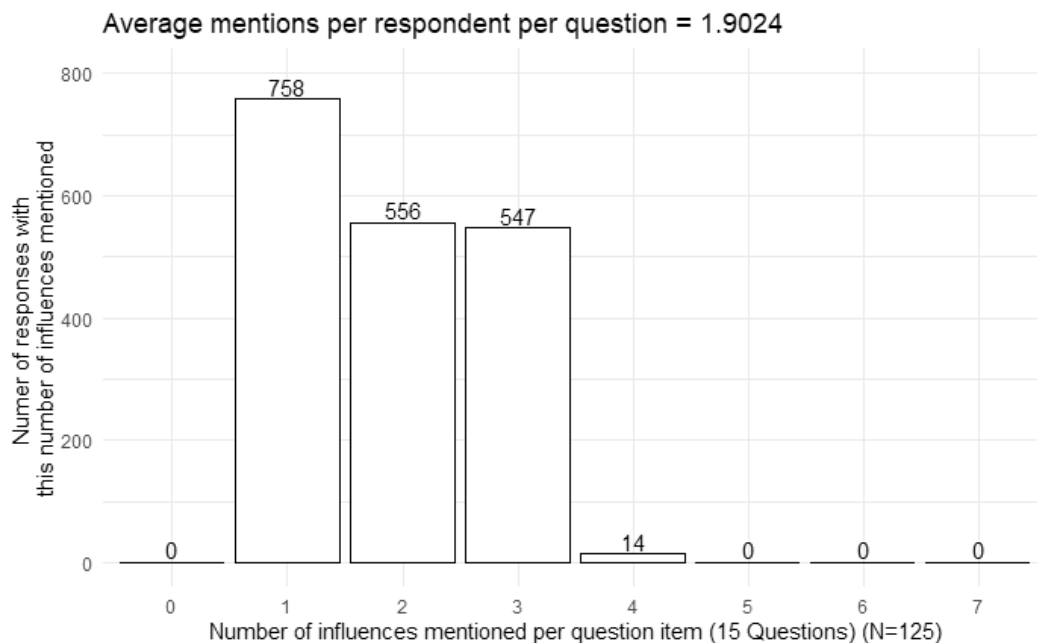


Figure 4.6. AGL-Influences - Average number of mentions per question response.

The raw counts of mentions for each of the question items together with sums of columns (influences) and rows (items) and percentages of raw mentions for each influence are given in table 4.1 (115).

Table 4.1. AGL-Influences - All responses (n=125 cases, q=15 items) Raw Count

AGL-Influences	Staff	Mentor	Trainees	External Community	Research	Self-Reflection	N/A	Row Sums
Bible and Theology	81	11	42	15	55	35	3	242
Culture	107	24	34	32	60	14	0	271
Location	17	11	4	52	111	16	3	214
Understanding the Organisation	103	30	25	36	4	3	4	205
Practical	72	6	22	56	18	4	18	196
Research	34	19	7	6	99	27	15	207
Cross-Cultural Relations	92	37	35	67	21	17	3	272
Conflict-Resolution Skills	75	30	57	18	16	46	9	251
Language	106	5	12	36	19	10	3	191
Family Transitions	70	36	50	15	15	35	15	236
Relating to others	69	36	77	15	11	60	4	272
Self and Personality	68	31	45	10	14	83	4	255
Habits and Spiritual Disciplines	55	46	44	10	19	74	2	250
Relationship to God	47	38	49	9	24	85	1	253
Self-Care	58	41	38	15	18	78	4	252
Column Sums	1054	401	541	392	50	587	88	3567
Raw proportions	29.5 %	11.2 %	15.2 %	11.0 %	14.1 %	16.5 %	2.47 %	100 %

It is notable, but neither surprising nor concerning, that the most frequently identified important influence was ‘Staff’, accounting for almost one third of mentions. The other influences were more equally spread.

The majority of high N/A totals for ‘Research’ (10/15) and ‘Practical’ (13/18) appear to be from those looking after young children as indicated by accompanying comments of several young mothers noting that they were too tired or just not able to devote as much attention to these areas. On the other side, the majority of high N/A responses to the ‘Family Transition’ item (12/15) were from unmarried respondents for whom this material was largely inapplicable. Other N/A responses were scattered and account for about 1.5% overall.

The results of more in-depth analysis are presented at 4.C.2 (143).

4.B.3 Helps to Learning and Growth (HLG)

The longer question set dealing with Helps to Growth and Learning was modelled on the more recent evaluations now given to trainees twice during the course: half-way through, and just prior to graduation. Records of these evaluations go back to 2009. It is likely that some evaluation was done prior to this but no usable records were found in the researcher’s enquiries. The questions relate to specific modules and other elements of the course which might vary in both content and naming between courses, both because of constant improvements to the overall program and the commitment to provide learning which is focused on the needs of those in the particular cohort.

The results are presented in figure 4.7 (117). As can be seen by the number of responses noted for each question (numbers on right hand side) many respondents do not appear to have recognized the particular titles now included in the course. The only item appearing consistently enough to get universal response (n=125) was community meals!

Due to the high number of incomplete responses, no further analysis of this data set was considered worthwhile in this research project. There may be some marginal value in comparisons with the data-sets available since 2009, but the prospect of substantive findings seems unlikely.

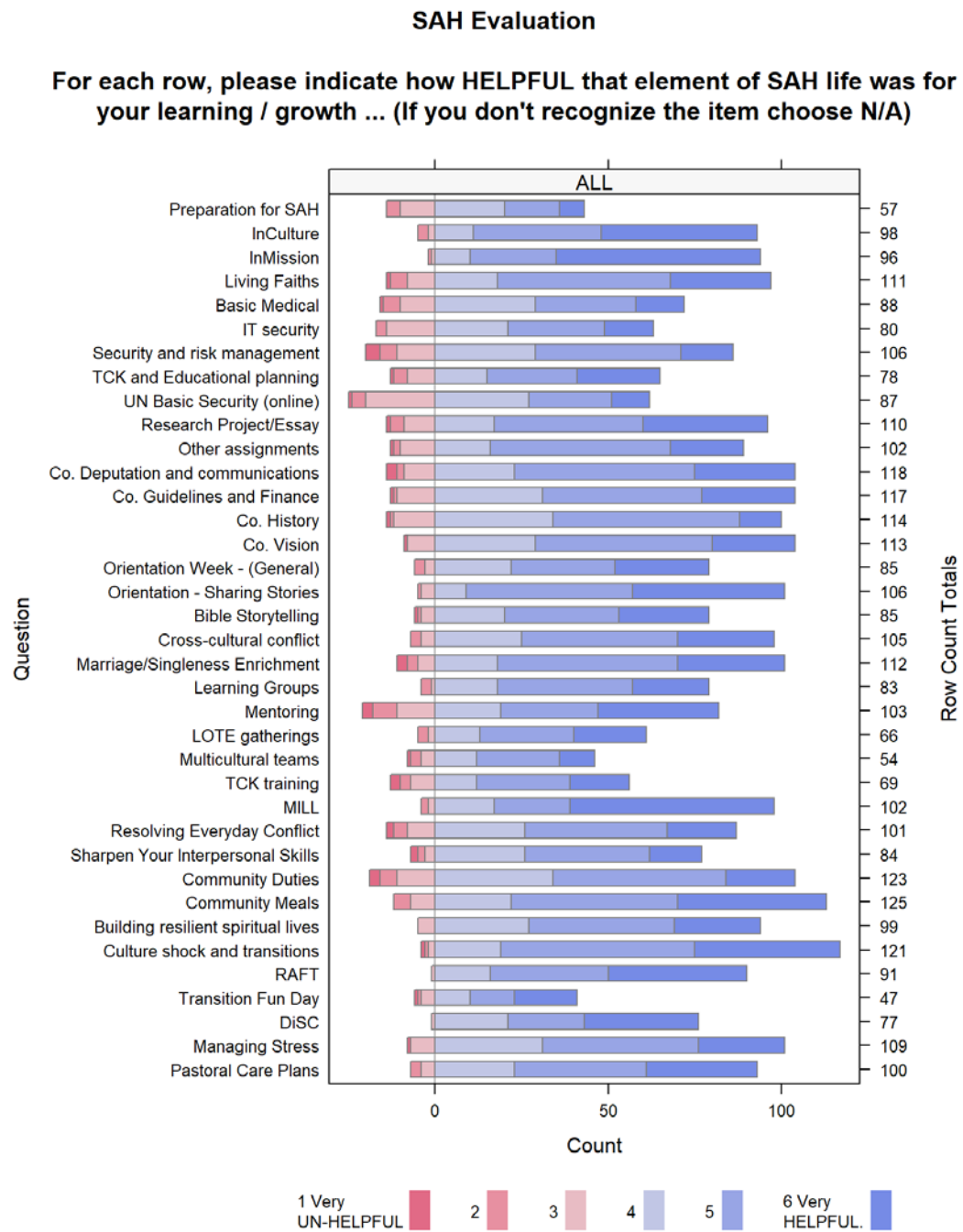


Figure 4.7. Helps to Learning and Growth - Overall Responses

4.B.4 Difficulty of Living in Community (LIC)

One item included in the current evaluations, “Difficulty of Living in Community” (LIC) in figure 4.8 (118), was scaled differently to the other HLG1 questions.

Responses indicate that, though most found living in community was relatively easy, there was a range of experience.

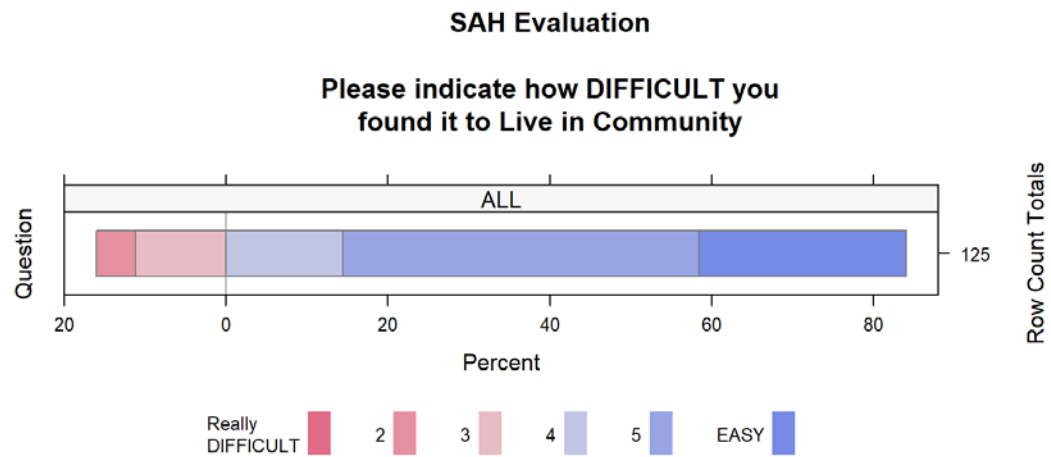


Figure 4.8. Difficulty of Living in Community (LIC)

4.B.5 Learning Community (LC)

The questions on the experience of the learning community can be divided into two, with the first 5 items modelled directly on the scale developed for use in undergraduate university level education (LCS figure 4.9, 119) and the remaining 7 items (LCD figure 4.10, 120) aiming to explore the deeper kind of community experience that might be relevant in this setting. The results suggest that most trainees have very positive experiences of the learning community. The areas of dissatisfaction appear primarily related to the interactions between staff and trainees, which is covered in the next set of questions (MORS).

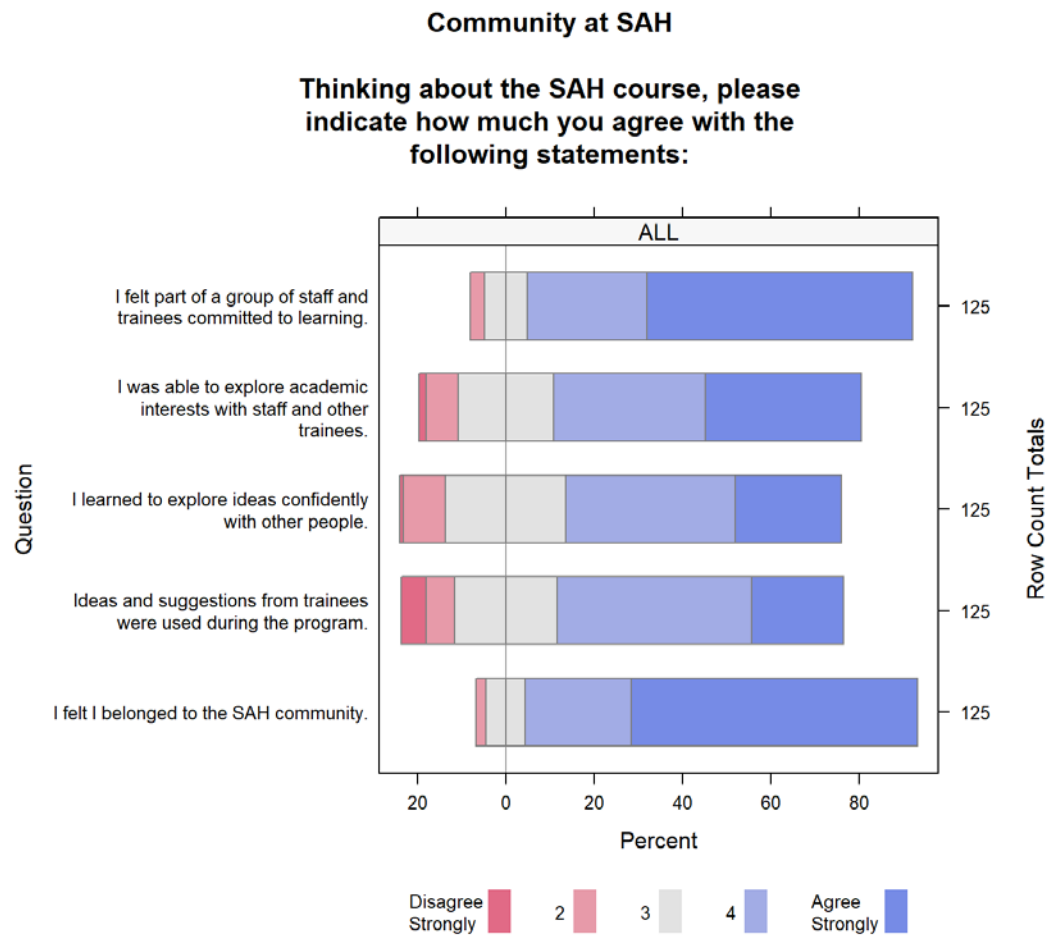


Figure 4.9. Learning Community Scale (LCS)

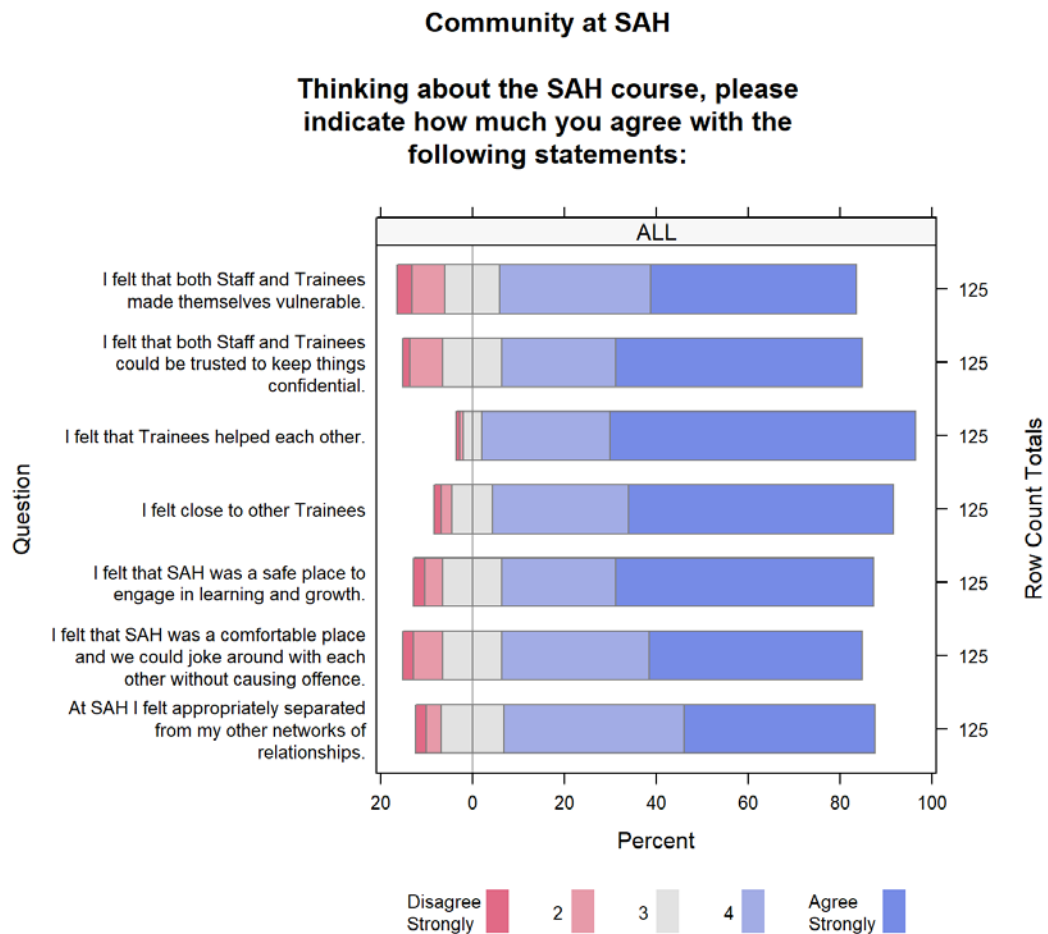


Figure 4.10. Learning Community - Deep (LCD)

4.B.6 Modes of Relationship (MOR)

Given the four options in the Relational Models Theory (RMT) presented in section 2.D.2 (35), the majority of respondents (70.4%, 88/125) indicated that relationships between staff and trainees (MORS figure 4.11, 121) were of a communal nature more than half of the time, however a majority also identified them as hierarchical for more than half the time (56%, 70/125). Comparing responses from the more recent courses (Hierarchical 42.0%, Communal 83.7%) against those from before 2008 (Hierarchical 81.8%, Communal 47.7%), the same data split in figure 4.12 (121), suggests this has been a significant area of change and in line with the aims to create relatively egalitarian *communitas*.

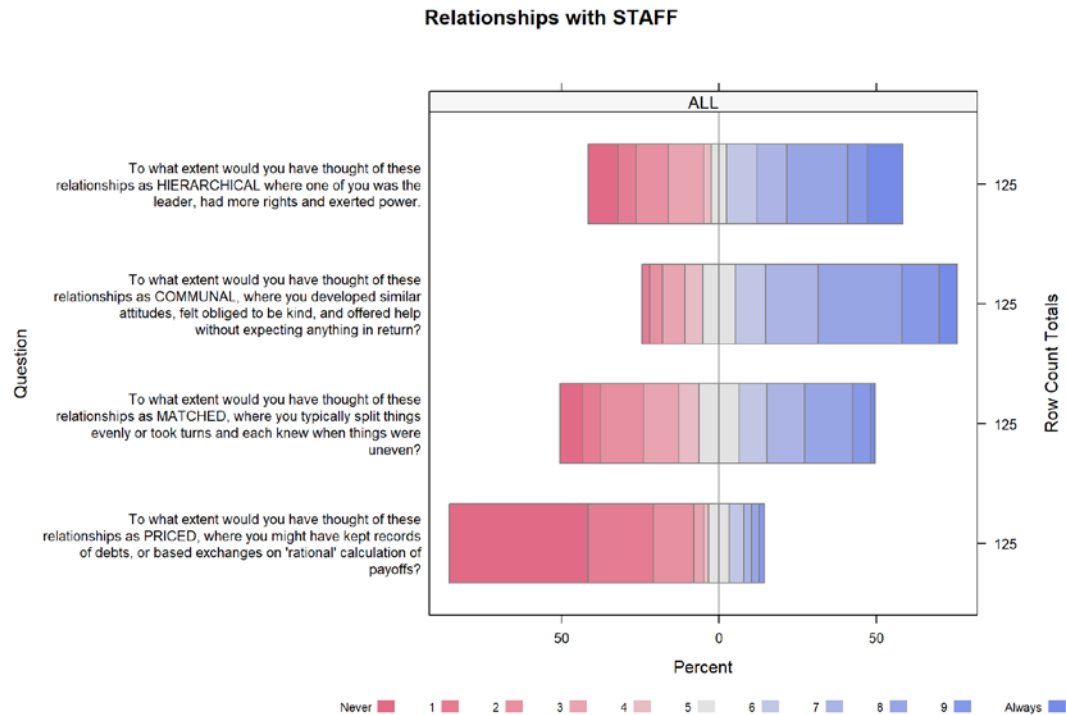


Figure 4.11. Modes of Relationship – Trainees with Staff (MORS)



Figure 4.12. Modes of Relationship-Trainees with Staff (MORS), also showing those who trained from 2008 onwards, and before 2008

The comparison with the same question items on relationships with fellow trainees, MORT in figure 4.13 (122), shows that most trainees feel that relationships with other trainees are more predominantly communal and matched.

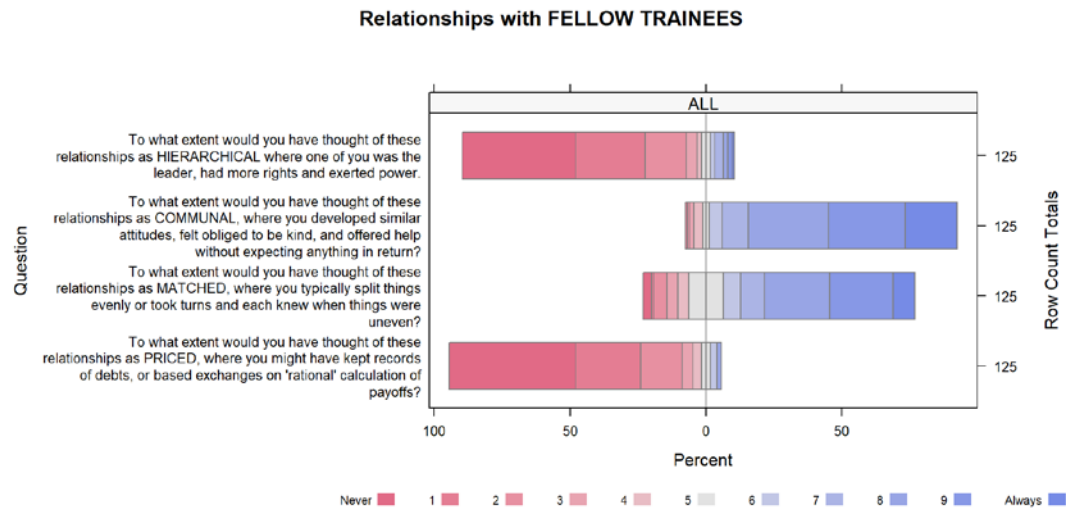


Figure 4.13. Modes of Relationship - Trainees with Fellow Trainees (MORT)

Although the original formulation of the four underlying modes of relationship suggests that the four proportions should add to 100 percent, it appeared that respondents tended to view them more as two pairs of polar opposites. Nonetheless, these questions appear to provide a useful measure of power differences in these relationships. The correlations between these items and other question sets is covered in the phase 3 analysis, Appendix 4.C.3.e (345).

4.B.7 Tension and Conflict (TAC)

The topic of tension and conflict came up frequently in the first phase of discussions, both with trainees and staff. Thus it was expected to be a topic of more significance. Questions were asked about the issues around which Tension and Conflict arose (TAC1) and overall attitudes towards Tension and Conflict (TAC2).

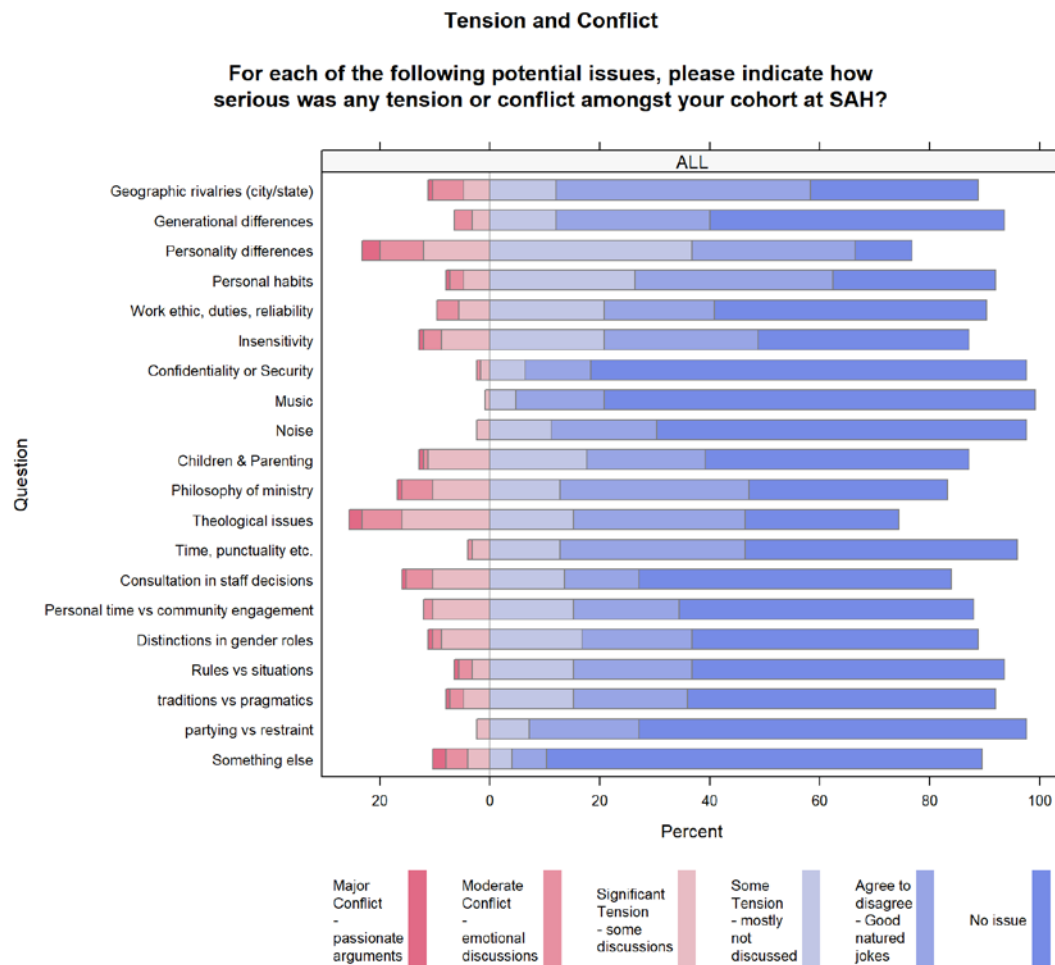


Figure 4.14. Issues of Tension and Conflict (TAC1)

For the issues question, figure 4.14 (123) presents the results arranged so that those extending to the left of the line at zero (0) indicated at least “Significant Tension” and is taken as the marker of something likely to be identified as important. The issues with the most tension and conflict are shown in descending order in figure 4.15 (124), where just the three worst outcomes (Major Conflict, Moderate Conflict, and Significant Tension) are included in overall counts. Theological issues was highest amongst these being mentioned by about one quarter of respondents but closely followed by Personality differences, mentioned by about 23%. Further work is presented in 4.C.3.b (154), Appendix 4.C.3.f (348) and Appendix 4.C.3.g (351). Analysis of TAC1 responses showed that only 67 respondents, about 54%, reported one or more issues with at least “Significant Tension” of tension and conflict.

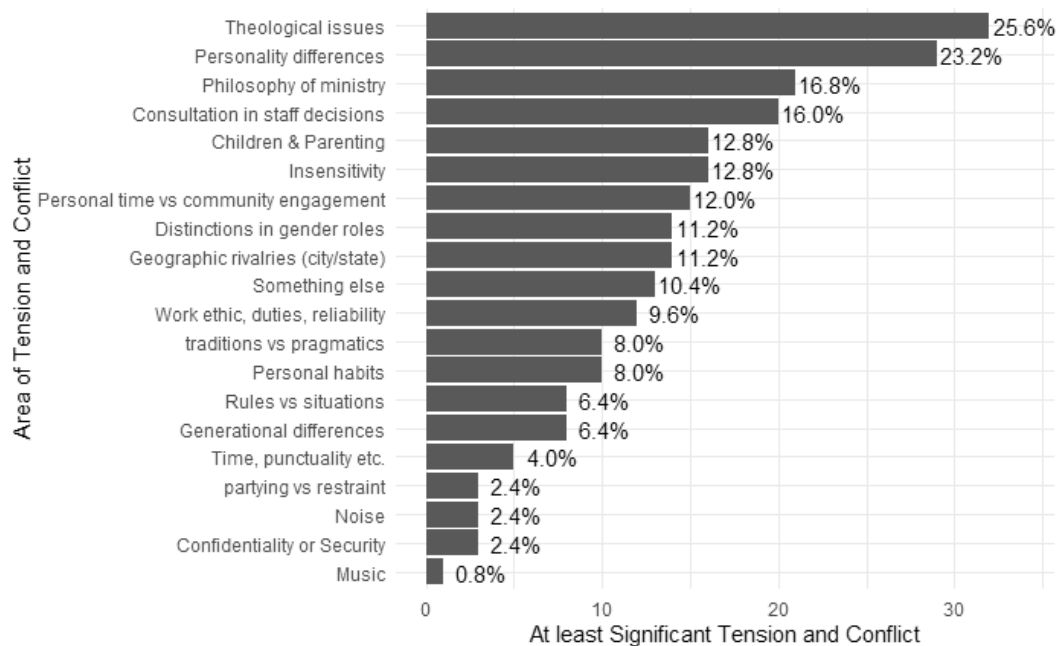


Figure 4.15. Incidence of at least Significant Tension by Area (TAC1)

The second set of questions in this area, TAC2, enquired about respondents' beliefs about tension and conflict in general. The first question asked about how common they believe tension and conflict might be generally amongst training cohorts (see figure 4.16, 125). Almost 90% of respondents believe that "at least some Significant Tension" is experienced in at least half of the cohorts, and the median estimate suggesting half believe it occurs in 7 out of 10 courses. These two ways of approaching the TAC2-a data can be compared to the TAC1 responses, where only 67 responses, about 54%, reported one or more issues with at least that level of tension. In other words, respondents apparently tend to believe that their own cohort experience less tension than average, potentially a form of "above-average" effect (Chambers and Windschitl 2004, 813). Further to this, most people think that the most serious tensions did not greatly affect their cohorts, with more than 70% selecting the lower impact options, (see figure 4.17, 125).

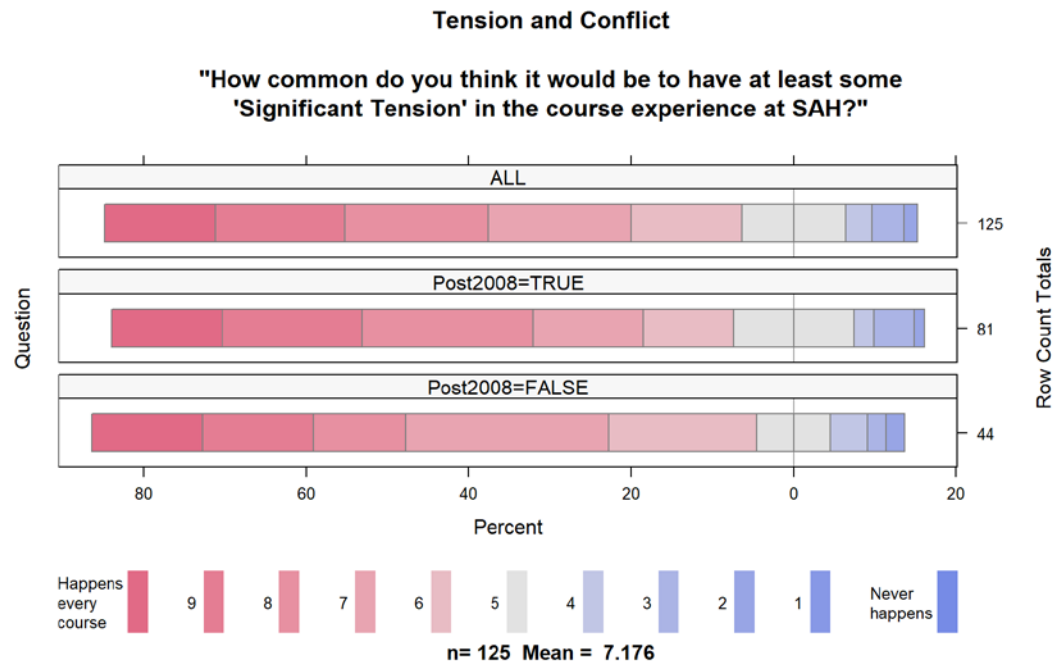


Figure 4.16. Belief in the prevalence of 'Significant Tension' (TAC2-a)

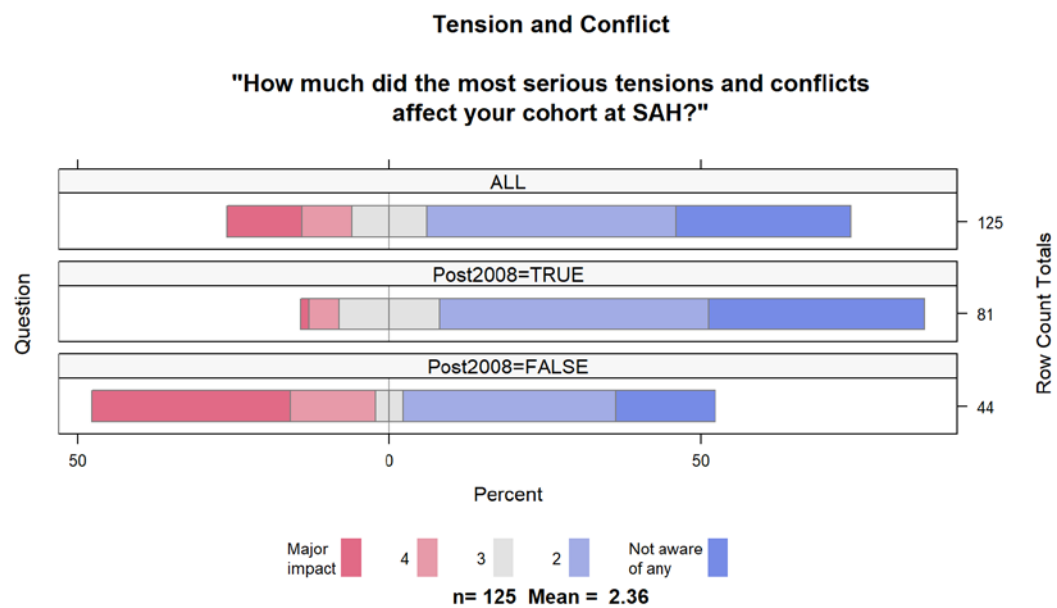


Figure 4.17. Impact of the most serious tensions and conflicts (TAC2-b)

It appears that most tensions and conflicts were resolved satisfactorily by the end of the course, however, a significant minority of conflicts, 20-40%, considered the results unsatisfactory (see figure 4.18, 126).

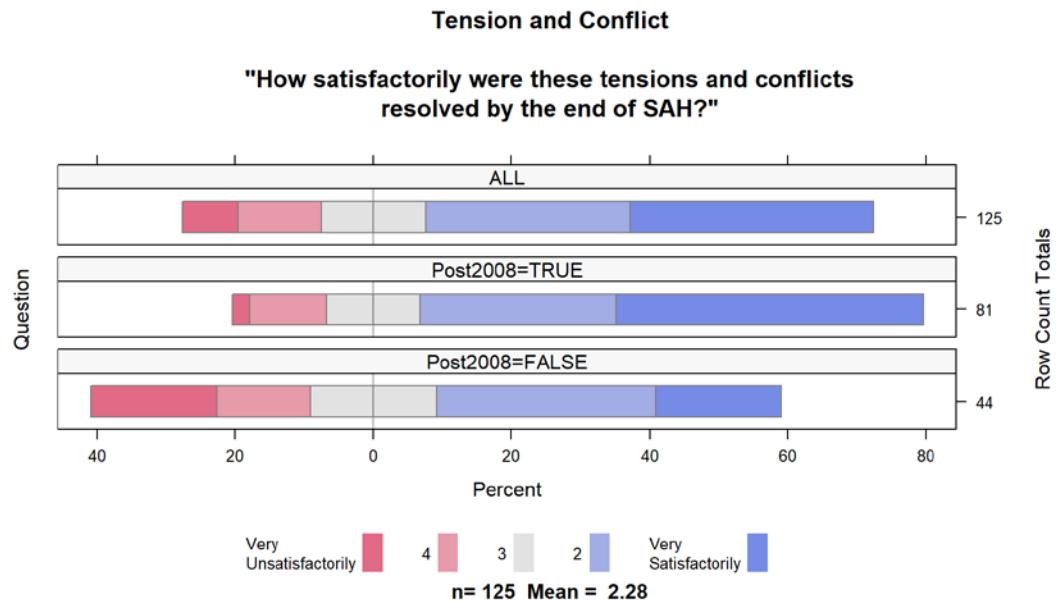


Figure 4.18. Satisfactory resolution of Tension and Conflict (TAC2-c)

When asked how necessary it was to experience tension and conflict in the course, see figure 4.19 (126), only a small minority (3=2.4%) thought it to be of no benefit and a larger number (12, nearly 10%) regarded it as 'Essential'. Just over 70% of respondents gave a response on the 'essential' side of the mid-point. This suggests that they consider this to be an important part of the course experience.

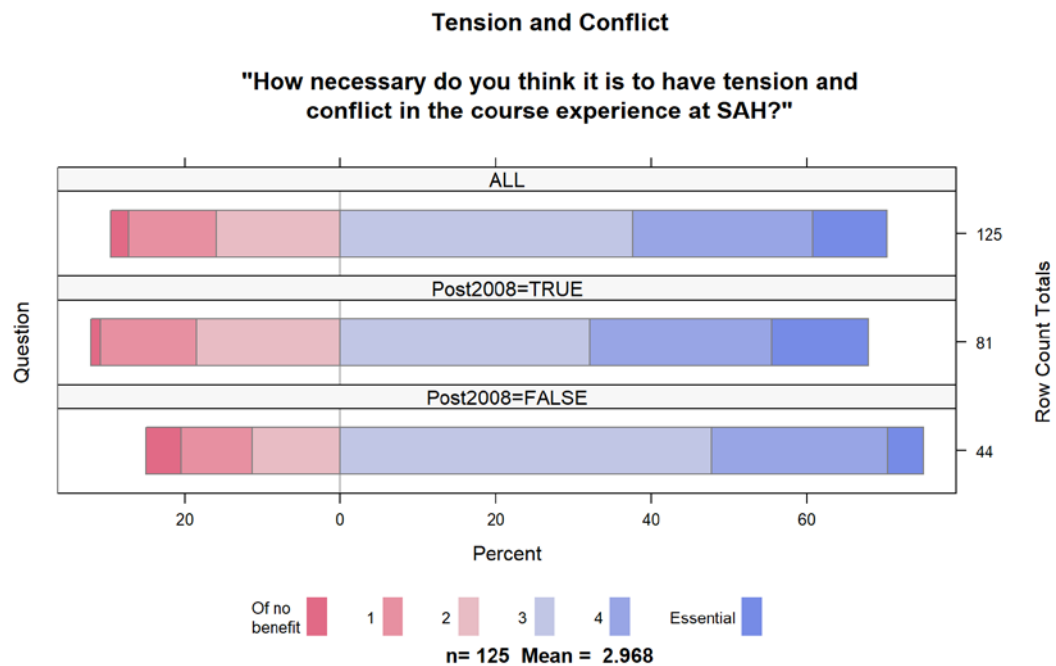


Figure 4.19. Belief in the Necessity of Tension and Conflict (TAC2-d)

The final question in this area asked about how helpful their experience of tension and conflict had been to them personally (see figure 4.20, 127). Again, more than two-thirds of respondents found that their experience of tension and conflict was more helpful than not (i.e. a score closer to ‘Essential’). This might also include the opportunity to successfully practice conflict resolutions skills taught as a module during the course.

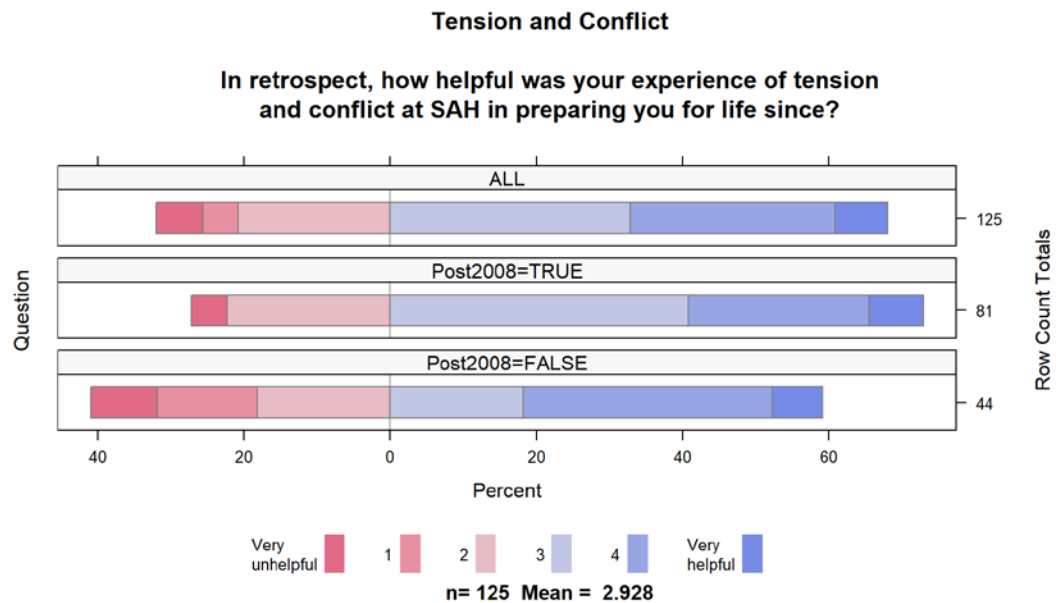


Figure 4.20. Helpfulness of experience of Tension and Conflict (TAC2-e)

Overall, these early results would support the idea that the experience of tension and conflict is indeed an important element of the course. Yet even in this, it seems there are polarised views about how helpful it is and accompanying comments suggested that both participants in and witnesses to the most serious forms of tension and conflict might have benefited from earlier intervention.

4.B.8 Self-Reported Psychometric Preferences (PP)

As noted in focus group interviews, the course at SAH has included some form of psychometric testing more often than not and the results of these tests are often referred to as the course progresses. Over 75% of all respondents reported finding these useful, i.e. rated at least 3 on a scale from 0 to 5 (see figure 4.21, 128).

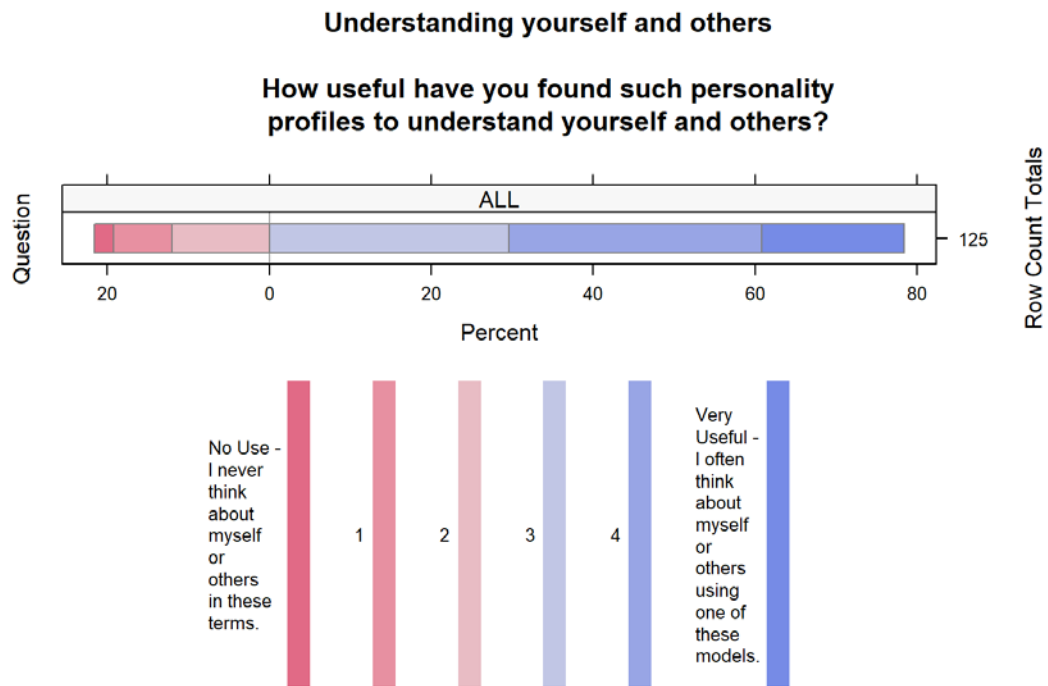


Figure 4.21. Perceived usefulness of personality profiles

Three self-reported psychometric profiles were analysed at a very basic level. The first two, the Thomas-Kilmann Inventory (TKI) and the DiSC personality profile, are in current use whereas previously the Myers-Briggs-Type-Indicator (MBTI) had been used previously. The changes in preferred instruments help to explain the lower numbers reported. A few comments also referred to the Enneagram but this was likely administered outside of the course.⁶⁹

4.B.8.a Thomas-Kilmann Inventory

As a measure of personal preferences in conflict management style the Thomas-Kilmann Inventory places a person's preferences on two axes, assertiveness and cooperativeness. These can be understood more popularly as a concern for issue and

⁶⁹ The researcher notes concerns about the validity of such instruments but chose to include the very short section of questions as a potentially useful measure of the functioning of the course. These personality profiles came up regularly in discussions and focus group interviews and were therefore considered to be an important element of the course, with any deficiencies in the accuracy of validity of psychometrics likely outweighed by the ongoing usefulness of the conceptual models as discussion points both in class and between individuals giving common language to discuss differences.

a concern for relationships as per the original model by Robert Black and Jane Mouton (Johnson, Thompson, and Anderson 2014, 1).

The self-reported TKI conflict management styles for n=85 respondents are presented in figure 4.22 (129). This shows a strong bias towards those with higher concern for relationships (high: 52%, low: 13%).⁷⁰ The other axis bias was also mildly away from concern for issues (high: 27%, low: 40%). On the positive side, as an organisation which predominantly sends people to work with people, rather than projects for example, this is more of a comfort than a concern and might well reflect to some extent the organisational culture. However, this does raise a question about whether there might be unintended consequences of these biases.

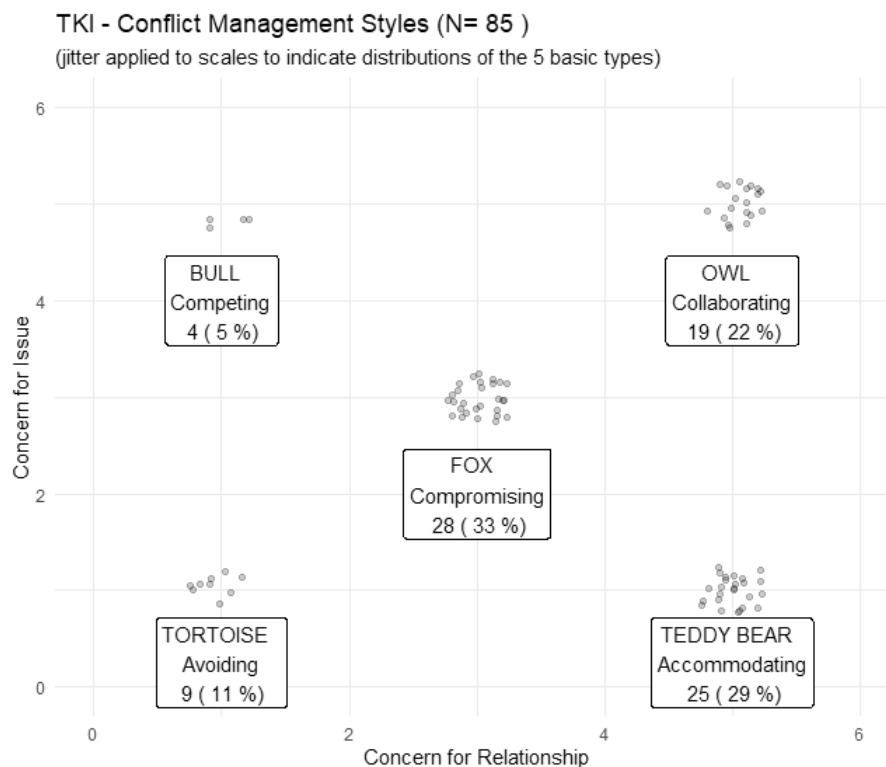


Figure 4.22. Conflict Management Styles for 85 respondents on TKI.

⁷⁰ This is perhaps even more unusual given that Australians have been scored 'significantly higher' on Competing when compared to the U.S. Norm Sample (Herk et al. 2011).

4.B.8.b DiSC

A second set of results comes from self-reported DiSC personality profiles which is the predominant instrument now used at SAH. The distribution shows a substantial bias towards the 'S' (35%) and 'C' (33%) areas of the map and away from the 'D' – with only 7 (9%) reported, figure 4.23 (130). The DiSC is apparently normed for each country so that each type should be equally likely. The biases in this distribution could not be easily explained by random variation, $X^2(3, n=76) = 13$ with $p = .0045^{**}$.

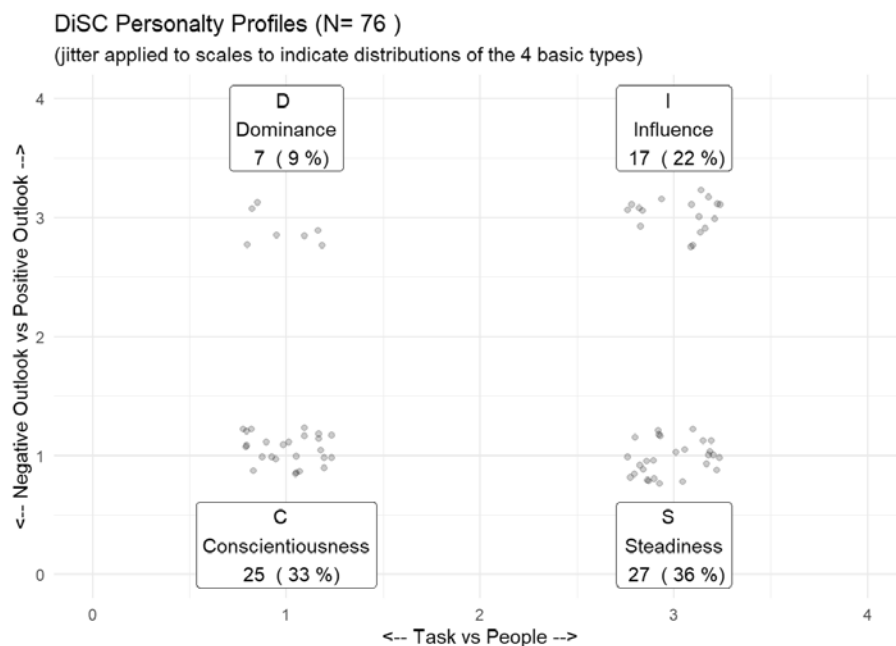


Figure 4.23. Distribution of DiSC personality profiles for n=76 self-reports

4.B.8.c MBTI

The third small dataset of interest in this area was the self-reported MBTI with n=54 respondents reporting a full MBTI type. (A further nine respondents reported partial types but these have not been included here). The observed distribution was compared to Australian normed probabilities (Ball 2005), with one result of possible significance. An unusually high 7/22 males (I=3.6*) identified as INTJ, contributing to a male bias away from Sensing and towards Intuitive (S_{SAH_M} : 27%, N_{SAH_M} : 72%). Compared to Australian norms (N_{AUS_M} : 42%), UK Christian norm ($N_{UK_Christian_M}$: 43%) (Craig, Francis, and Barwick 2010, 34), male evangelical missionary personnel training in England ($N_{ENG_Miss_M}$: 35%) (Craig, Horsfall, and

Francis 2005, 479), and male Australian church leaders (NAUS_CL_M: 25%) (Powell, Robbins, and Francis 2012, 27). Since only 22 males were included, the result seems likely to have been biased in some way. Further investigation is out of the scope of this study.

4.B.9 Post-SAH Connections (PostSAH)

As part of the investigation of the research question about ongoing influence, SQ4 in 3.A.1 (72), several questions were asked about the continued connections with other trainees from the cohort. Respondents showed a preference for more frequent contact on family news, work news, and mutual support (see figure 4.24, 131). Whilst this shows a continued connection, there seemed to be less interaction in two areas which would have suggested more intentional developmental input into each other's lives, that is, sharing of useful resources, and personal accountability.

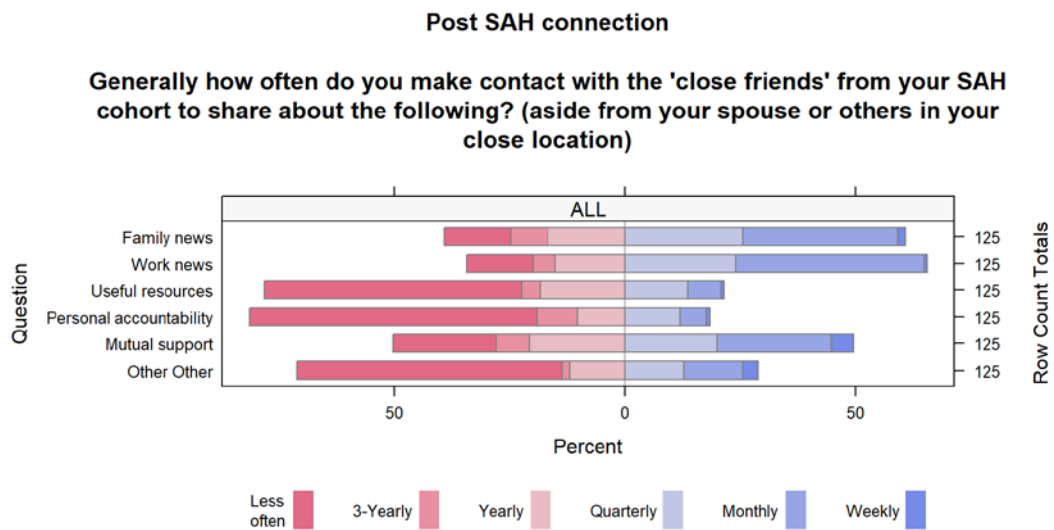


Figure 4.24. Post-SAH – Frequency of contact by area of sharing

Furthermore, the media used for contact reinforced the impression that respondents were not continuing with close friends in ways conducive to more intentional growth and learning such as face-to-face meetings, audio calls, and real-time chats (figure 4.25, 132). Admittedly, email could be useful in this regard but together with the results of the previous question, it seems less likely that deep interactions are common via this medium.

These results are explored further below, 4.C.4 (155).

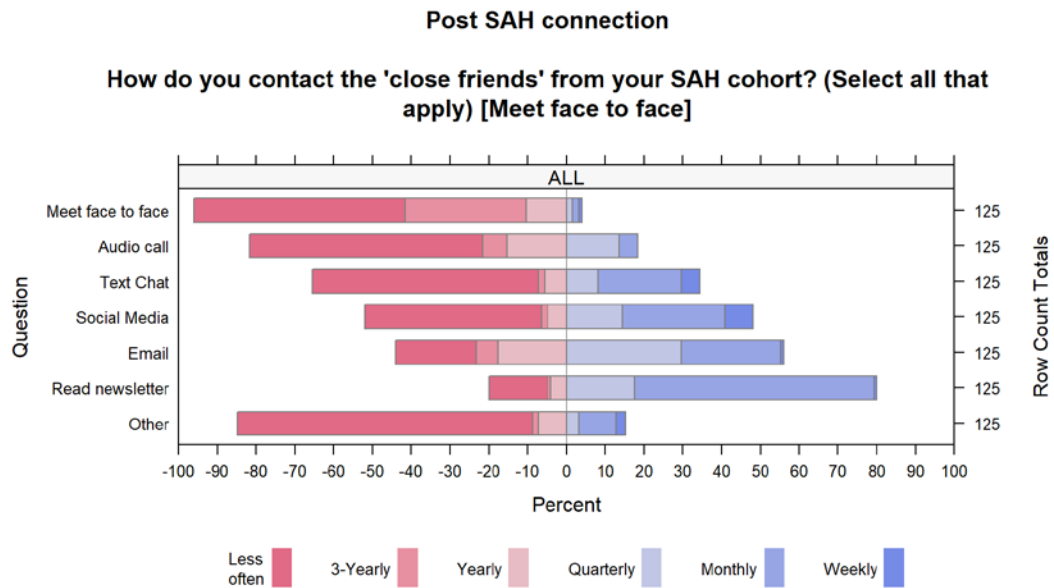


Figure 4.25. Post-SAH – Medium used for contact with cohort members

4.B.10 Communities of Practice (COP)

There were two aims for investigation in the area of Communities of Practice. The first aim was to gather information on the current prevalence of membership of any kind of group that might fall into the definition of a community of practice. A second aim was to gauge support for the idea that the organisation might devote resources to facilitate such groups and on what basis the groups might be formed.

Questions were asked about previous or current experience of being a member of a community of practice, whether they would be interested in joining such a group, and whether such groups should be formed on the basis of type of work, location, or their training cohorts. A community of practice (COP) does not appear to be a common experience with only 56 respondents (less than 45%) reporting ever having been in such a group, and only about 30% currently in such a group, figure 4.26 (133).

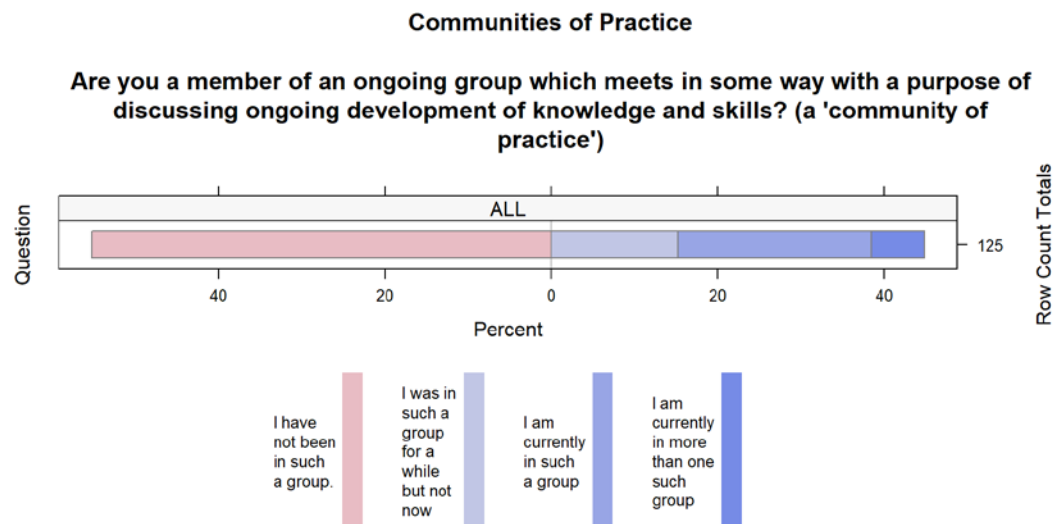


Figure 4.26. Communities of Practice – Membership

When asked about the mode of meeting, figure 4.27 (133), it seems that almost all of those who have ever had such an experience met face-to-face (54/56) with a range of other media also employed.

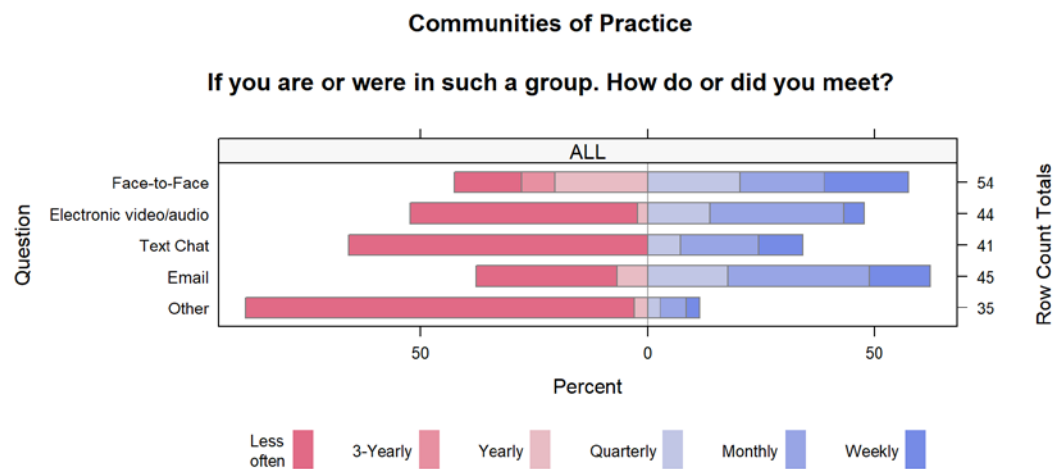


Figure 4.27. Communities of Practice – Mode of meeting

When asked if they thought the organisation should set up such communities of practice, figure 4.28 (134), there were mixed responses with slightly more in favour than against.

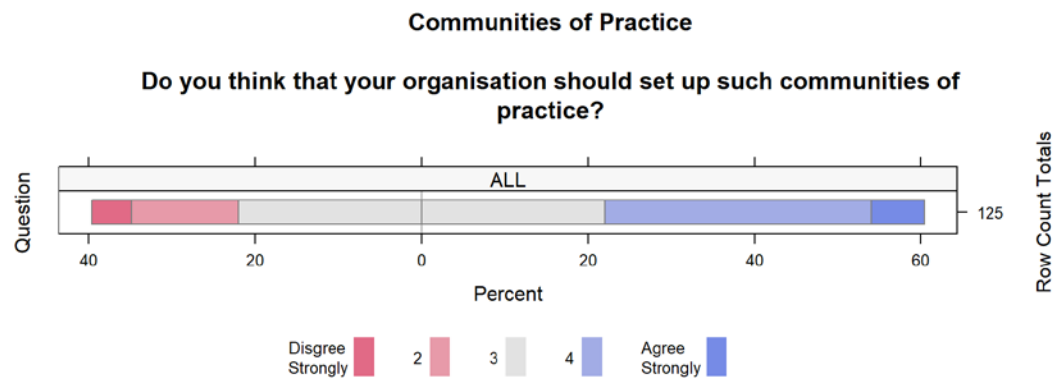


Figure 4.28. Communities of Practice – Attitude to organisational facilitation

However there was a more strongly positive response to the idea of joining such a group, figure 4.29 (134), with 2 offering to coordinate or lead such a group, 17 interested and ready to participate, and another 47 who would consider joining.

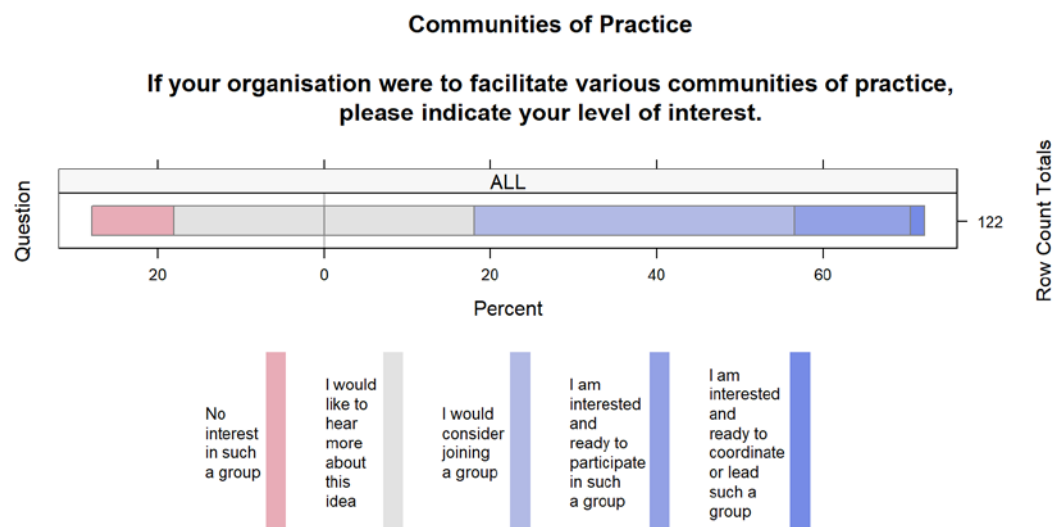


Figure 4.29. Communities of Practice – Attitude to joining

When asked about the basis for setting up such communities of practice, figure 4.30 (135), there was a clear majority preference away from the training cohorts and towards groups formed around similar types of work (62 or 57% of those who answered the question) and with a substantial minority suggesting location (41 or 33%).

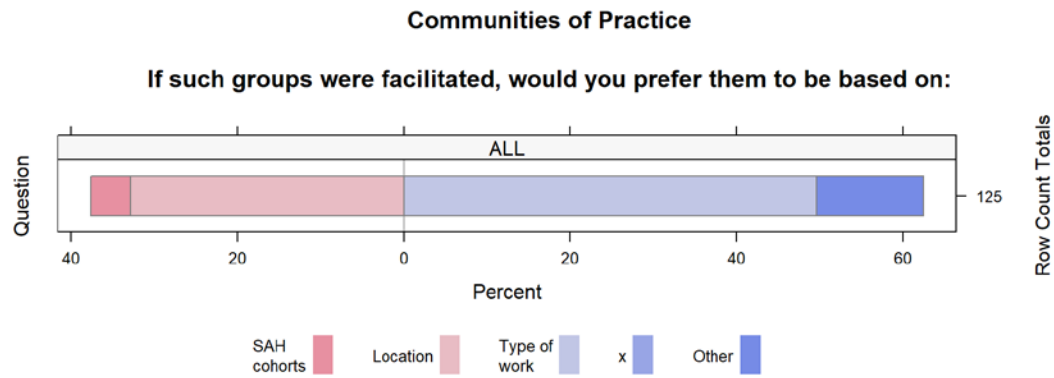


Figure 4.30. Communities of Practice – Basis of Group

4.B.11 Demographic Splits

It is standard practice to check data sets against relevant demographics, splitting the responses into different groups and comparing with statistical tests. From focus group interviews five groupings were considered potentially important: Gender; Marital Status; whether the respondent had accompanying children; whether there was an infant or pregnancy; and a time-based split of those who have trained before 2008 (Post2008 = FALSE) and those who trained from 2008 onwards (Post2008=TRUE).

4.B.11.a Gender

Splits on Gender revealed little variation, with means of responses for Male and Female trainees not significantly different across almost all scales.⁷¹

4.B.11.b Marital Status

Splits on marital status again revealed little variation, with both married and single respondents giving very similar evaluations across almost all scales. However, there were some differences with both quantitative data and qualitative data which suggest that some elements remain more frustrating for single trainees.

⁷¹ This is a comforting result suggesting that overall the course is perceived as appropriately balanced by trainees. This wide appeal is of particular significance given that most trainees originate within the Anglican Church of Australia in which gender roles have been a particular point of debate between the dioceses for decades.

Mann-Whitney U-tests indicated that married trainees rated their course experience more necessary, encouraging, enjoyable, and time-well-spent with a mean difference for each question of just over one third of a category out of the six-category scale. The predominant trend is shown in figure 4.31 (136), the chart of Overall Course Experience split between married (Married=TRUE) and singles (Married=FALSE).

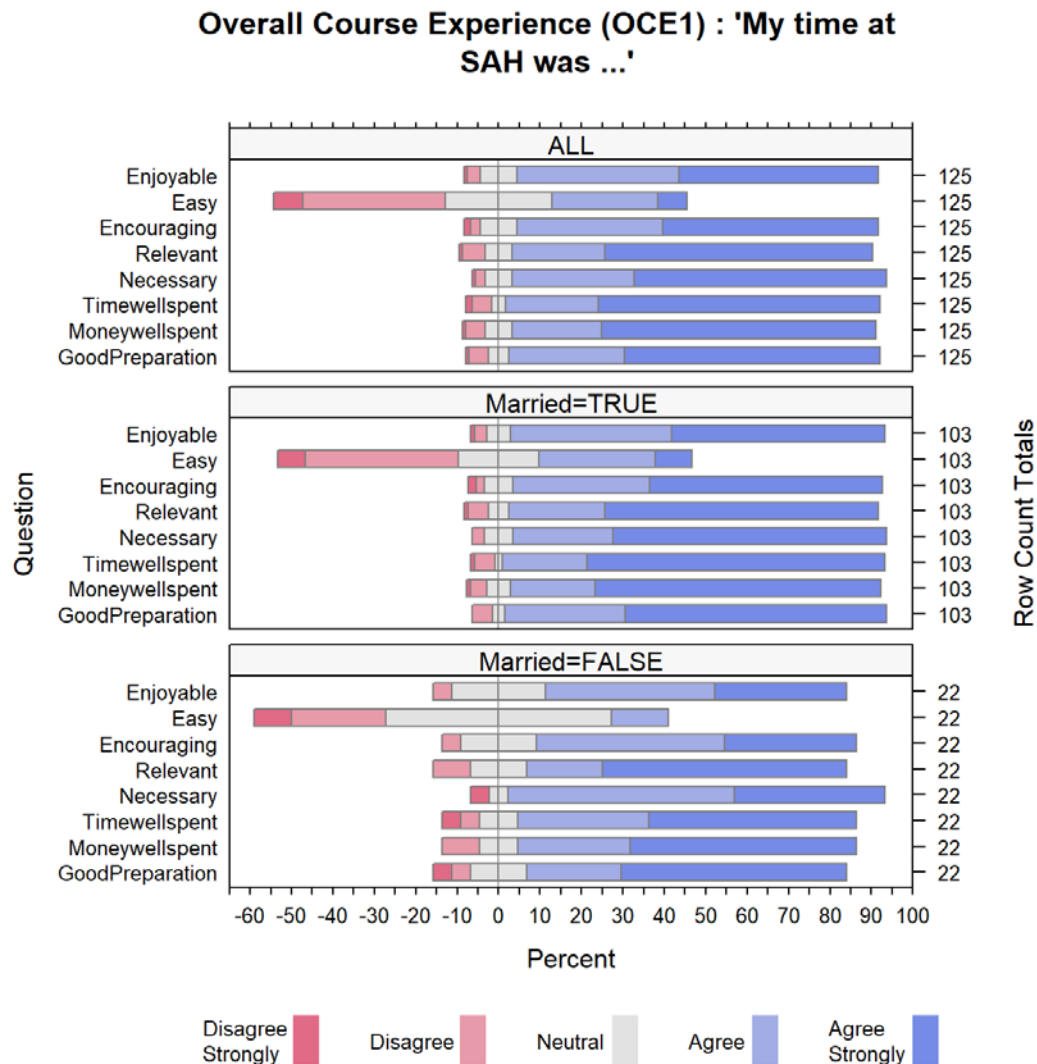


Figure 4.31. Overall Course Experience with overall, and split by marital status. Note shift away towards disagreement on most scales for unmarried trainees.

4.B.11.c Children and Perinatal

Many couples are either starting or adding to their families about the time that they are training. Focus Group interviews and other discussions highlighted the difficulties of attempting studies whilst having young children or being in the early stages of pregnancy. In other discussions with staff they had suggested that it was

more preferable to come with an infant under 6 months, than one slightly older but too young for childcare. A delimitation of *Perinatal* was used as “someone who came to SAH with a child less than 6 months old or had a baby within 6 months of the end of SAH.”

There were some differences between those who trained with or without children. As noted earlier, generally mothers with young children had lower rates of participation and lower levels of satisfaction with the course. Even so, there was remarkably little variation which suggests that the current course is generally catering well across that spread.

Some brief analysis was performed on Perinatal splits but nothing pertinent to this study was immediately apparent.

4.B.11.d Change in 2008

The biggest obvious division within the survey dataset was found between those who trained prior to 2008 at which point a number of course changes were instituted. The current principal has also been in place since 2008. Almost every measure of evaluation on the course showed significant difference in means with most measures showing improvement over time.⁷²

4.B.12 Observations from Comments and Other Text Responses

As noted in the previous chapter, question sets usually had space for a text response to comment upon the set of questions. These were read to check whether the questions were interpreted as intended. A small number of comments that suggested that certain questions had been harder to interpret but overall comments were generally positive. Some of the comments indicated great variety in responses and preferences, for example, with regard to aspects of the course that trainees had found

⁷² A recency effect might have biased these results somewhat. Time plots of a sample of data points with mean scores in 5 year intervals tended to show improvements over time however the pre-2008 data was relatively sparse.

helpful or unhelpful, the ways that they liked to learn, and the value they placed upon the relational side of the course experience.

There was interesting diversity on the reactions to the personality profiling too. One respondent regarded it as harmful and thought it should have no place in a ministry context. Another described this area as “unscientific bunk.” Twelve respondents indicated a neutral or mixed attitude and 48 responses (38.4%) suggested that they found these models useful. Just over half of respondents (63 =50.4%) either didn’t remember this aspect of the course or left it blank. When compared with the quantitative measure above answered by all respondents (4.B.8, 127) it may be concluded that there is majority but not universal support for the use of these types of models.

A set of four questions of particular interest asked how participants might respond to someone intending to avoid certain aspects of the course. These were coded for agreement with the idea and tallied, with the results summarised below in table 4.2 (138). Most obvious is that the vast majority of respondents thought that the whole course experience was important including full-time, residing on-site, and in-person rather than online. Only a few respondents thought this was not necessary and/or were willing to consider these other options in theory, but no-one expressed particularly strong views against the course.

Table 4.2. Summary of response sentiments to alternative preparation options (n=125)

“What would you say to someone who wanted to ...”	Positive (i.e. Agree)	Neutral/ Mixed	Negative (i.e. Disagree)
Avoid going to SAH?	0	6	119
Study at SAH but only PART-TIME?	4	6	115
Study at SAH but stay OFF-SITE?	9	4	112
Study the SAH material but only ONLINE?	4	0	121

Of particular relevance to the topic of this research, many comments highlighted aspects of the deeper analysis (see the phase 3 results below) including that much of

the content could in fact be learned in other ways, but the real value was in the community, in the intensity of relationships and conflicts, of learning about oneself and of developing character. A sample of these comments (with the question indicated) follows:

“[This kind of] preparation is far more than an academic endeavour ... it requires a full overhaul of spiritual, physical, emotional areas in the individual that can only be achieved in an environment where the integrity of a person is pushed and developed.” (online)

“SAH is as much about relationship as it is about information.” (online)

“We learn who we are in relation to others.” (avoiding)

“Great, do it. But getting the information is not the same as being formed.” (online)

“Living in a community, and interaction with others is essential for the things that need to be learned.” (online)

“It is easy to avoid the real issues this way.” (online)

“Cross cultural work is essentially about relationships. You won’t be able to learn about yourself, develop interpersonal skills or have the benefit of involvement in cross cultural situations ONLINE.” (online)

“Only half the learning is academic/theological.” (online)

“You would be missing out on 90% of the course.” (online)

“You get exponentially more out of it living in a community.” (offsite)

Some final comments on the survey as a whole highlighted that even the few who had had difficult experiences still regarded the course highly:

“Although my answers seem very negative about my experiences of the program at SAH, I thoroughly enjoyed the cohort that I got to ride it out with. I am also very supportive of the training that now occurs at SAH.” (final comment)

“My negativity springs from exceptional circumstances, and not general opinions of the SAH course which was evolving at the time I attended” (final comment)

4.B.13 Phase 2 Summary

This section has presented the main results of the survey including both the bulk of the quantitative responses and the supporting qualitative analysis of accompanying comments.

4.C Phase 3 Survey Analysis—Results

In Phase 3 the focus was on survey data analysis in four main tasks:

- Task 1 confirmed the basic three-dimensional model of growth and learning.
- Task 2 used this model to obtain estimates of the relative contributions of six influences across these three dimensions of growth and learning with a focus on the influence of fellow trainees.
- Task 3 explored correlations between primary measures of growth and learning and the other question sets particularly focusing on the ways in which fellow trainees might be involved.
- Task 4 explored further ways that relationships between trainees in a cohort might continue to be important to growth and learning after course completion.

Several of these tasks are based on the mathematical concept of correlation between variables.

4.C.1 Task 1—Model for Dimensions of Growth and Learning

The aims of Task 1 were to confirm that a three-dimensional factorisation of learning was feasible and identify examples for each area of growth and learning. A model from theory was proposed allocating the set of 15 question items in AGL1 to the three dimensions of Instrumental Learning (IL), Communicative Learning (CL), and Reflective Learning (RL). An iterative refinement process was undertaken using Confirmatory Factor Analysis (CFA) to obtain a preferred model.

The preferred 3-factor model that resulted from this process, A.CRI3x, is set out in figure 4.32 (142). The original 15 questions were reduced to nine questions across three dimensions of growth and learning.

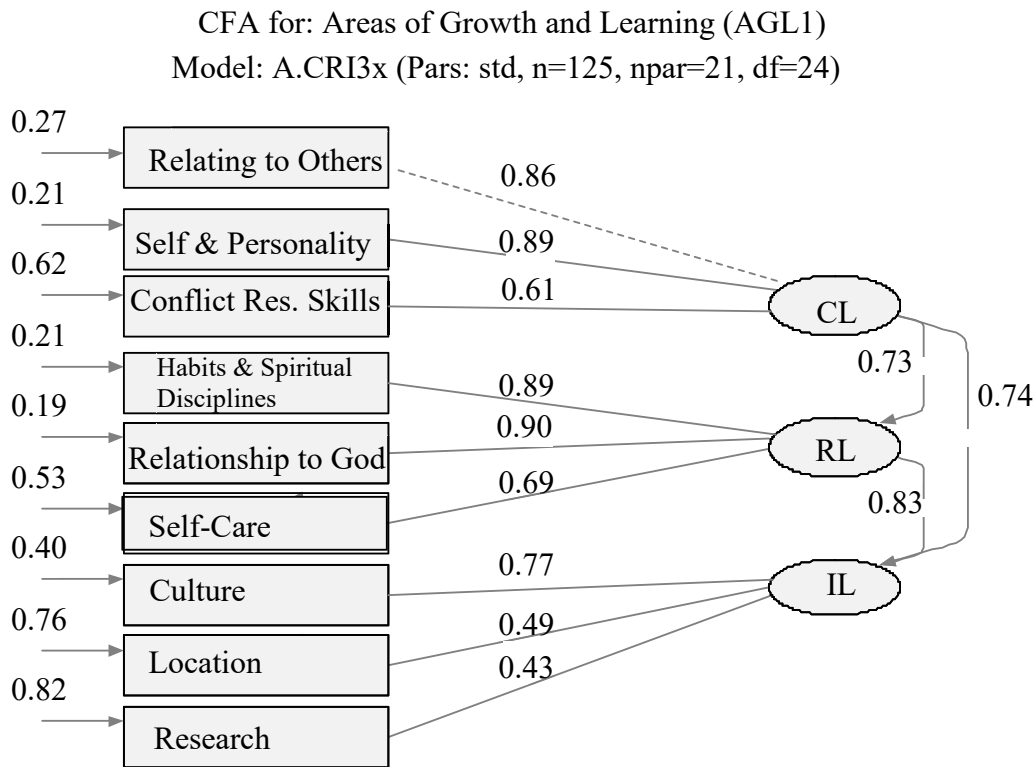


Figure 4.32 Preferred 3-Factor model for Areas of Growth and Learning, A.CRI3x

The parameters usually quoted to demonstrate good model fit (Parry 2017) were calculated as follows: $X^2_{scaled}(24, N=125)=22.6, p=0.545^{73}$; RMSEA=0.035; CFI_{robust}=1; SRMR=0.04. (A detailed table is provided in the appendices as appendix table 4.21, 319). Overall these measures show this to be a feasible model with a good fit to the data. There are limitations due to available sample size with relatively little power in the model to accept or reject a close fit (33% or 20% respectively). For this reason the model still needs to be described as tentative. However, this is still a useful result, and little more could be done to establish validity given that calculated sample sizes needed to improve the model power to 80% (375 and 422) would be larger than the population that qualified for this study. Further work could establish a similar educational situation with a substantially larger population if that were

⁷³ As a reminder, the *p.value* is usually interpreted as significant if $p<.05$, however in model testing the null hypothesis is that the proposed model exactly fits the data so higher *p.value* is desired.

considered worthwhile for other purposes. This model was considered adequate for use in the next step of analysis, Task 2.

More detailed results and calculations are presented for the preferred model, A.CRI3x, in Appendix 4.C.1 (315). These include the original correlation matrix with the 15 question items, CFA model outputs, fit measures, calculations for Cronbach's α of the set of three dimensions, and Cronbach's α eliminations for the set of all questions and separately each of the three dimensions.

4.C.2 Task 2—Estimation of Influences

The second task in this third phase was to estimate the contributions and biases of various influences on growth and learning using the model developed in Task 1. This was achieved by the analysis of responses from a matching set of questions (AGL-Inf) nominating the most important influences on the growth and learning of respondents in each of the areas used in the model developed in Task 1, 4.C.1 (141).

4.C.2.a Estimates of Influence Contributions

The relative contributions of each influence to each dimension were estimated by adding weighted mentions. These are summarised with bootstrapped confidence intervals in the chart of figure 4.33 (144). The fourth column, Aggregated Learning (AL), gives a simple average of the three dimensions.

These results suggest that teaching Staff contribute almost a quarter of the reported growth and learning (24%), Self-Reflection accounted for just over a fifth (22%), Research just under a fifth (19%), fellow Trainees (15%), Mentors (11%), and those External to the Community (11%). As can be seen on the chart, the contribution of Staff appears fairly well balanced but the other influences have substantial biases of contribution across the dimensions. Given the changes introduced in 2008, this analysis was repeated for the two subsets, Pre2008 and Post2008. The most substantial difference in the distribution of contributions concerned the role of Mentor, introduced in 2008, which showed a contribution of 3% Pre2008 and 22% Post2008 (see Appendix 4.C.2.m, 335).

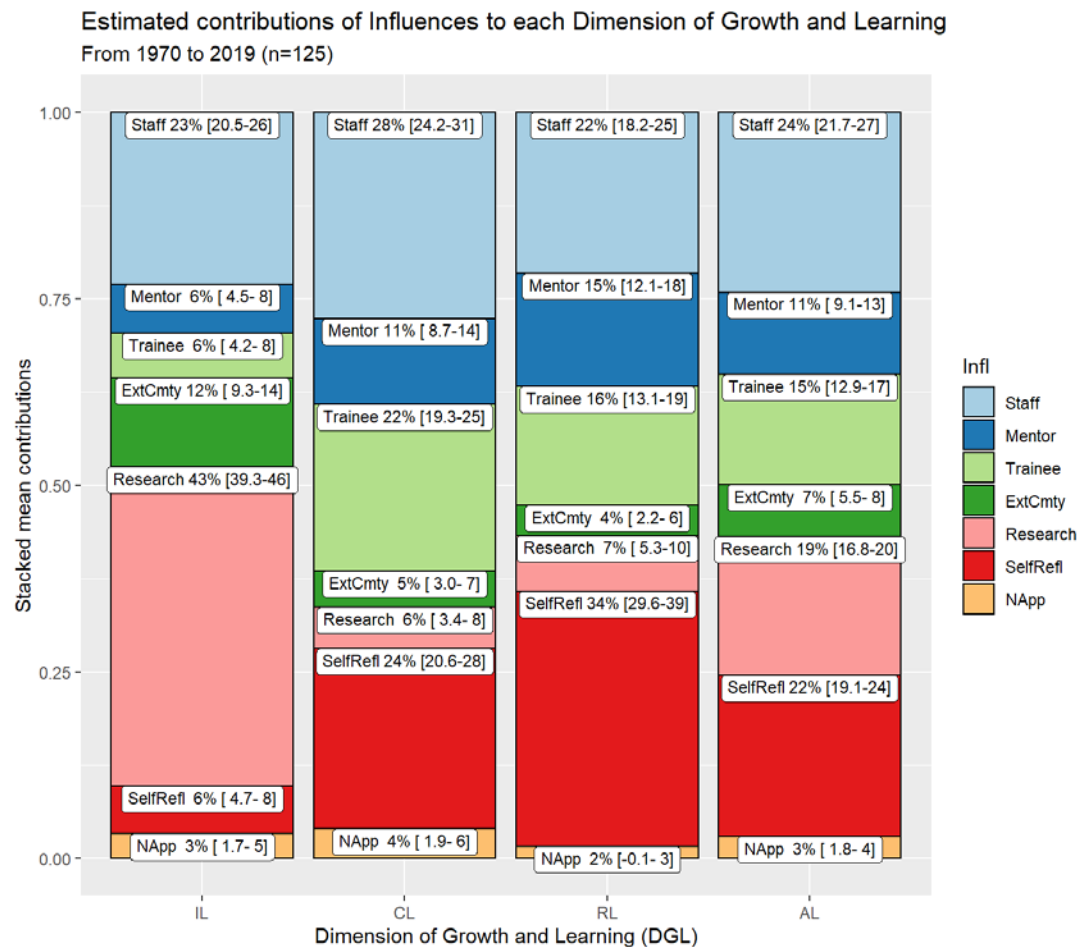


Figure 4.33. Estimated contributions of Influences to Dimensions of Growth and Learning with 95% confidence intervals

The next section explores biases and demographic variables using generalised mixed models.

4.C.2.b Exploration of Influence Bias and Demographic Effects

As described in section 3.D.3.b (100), the same dataset (AGL-Inf) was explored using generalised linear mixed models (GLMM) to identify significant biases across dimensions and to explore the effects due to various demographic variables. For each influence the probability of being mentioned in a dimension was calculated and results from a standard model structure, m2, are summarised in figure 4.34 (145). Tests were performed to determine if the differences across dimensions were significant and the main results of these are summarised in table 4.3 (146). Commentary follows focusing on the influence of fellow Trainees.

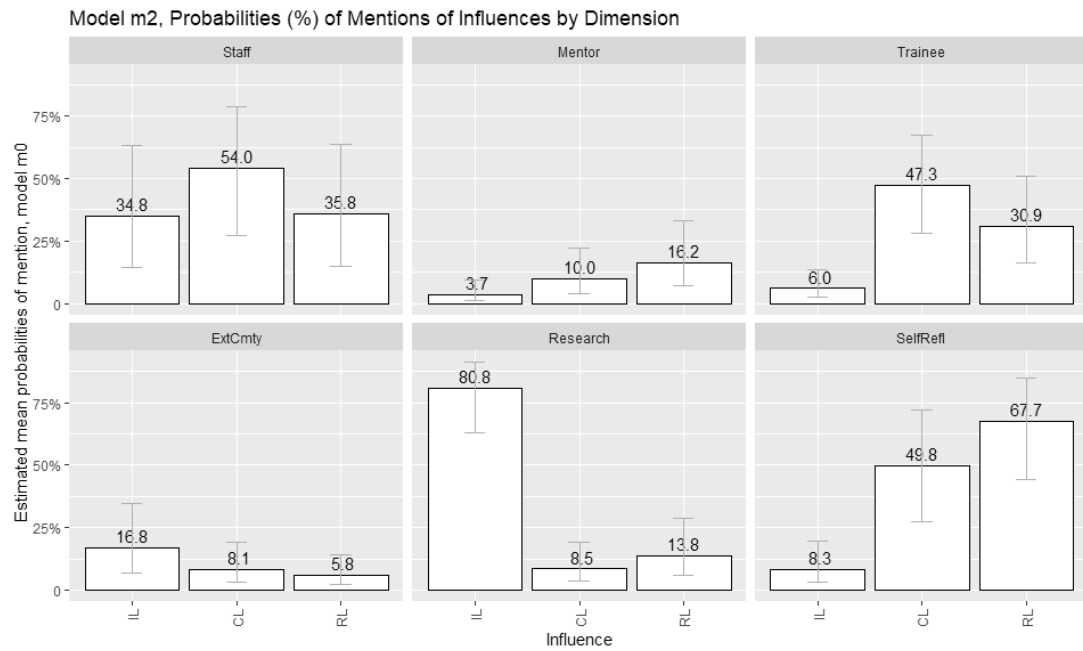


Figure 4.34. Model m2, Mean Probabilities of mention of Influences by Dimension with 95% confidence intervals calculated using GLMM methods.

The influence of fellow Trainees is clearly biased with respondents far less likely to mention Trainees as important influences in IL. The summary results, table 4.3 (146), show the paired tests with the difference of IL/CL towards CL (row ID1, column Trainee: $p < .001^{***}$) and IL/RL towards RL (row ID2, column Trainee: $p = .007^{**}$).

Similar observations can be made about the imbalances of Research (towards IL and away from both CL and RL) and Self-Reflection (away from IL and towards CL and RL). The imbalance for Mentors is slightly biased towards RL and away from IL (at $p = .06$).

Table 4.3. Summary of GLMM model tests showing direction and significance of inequalities.

ID	Model	Test Pair	Staff	Mentor	Trainee	Extl Cmty	Research	Self- Refl
1	m2	IL / CL	n.s.	n.s.	< *** <i>p</i> <.001	n.s.	> *** <i>p</i> <.001	< ** <i>p</i> =.003
2	m2	IL / RL	n.s.	< . <i>p</i> =.06	< ** <i>p</i> =.007	n.s.	> *** <i>p</i> <.001	< *** <i>p</i> <.001
3	m2	CL / RL	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

Inequalities: LHS<RHS or LHS>RHS.

Significance: *** *p*<.001; ** *p*<.01; * *p*<.05; . *p*<.1; n.s. not significant

The effects of demographic variables were investigated with further post-hoc tests performed on the models m2 and m3 for each of the six influences with a summary of those tests in table 4.4 (147).

Table 4.4. Summary of further GLMM model tests showing direction and significance of inequalities.

ID	Model	Test Pair	Staff	Mentor	Trainee	Extl Cmty	Research	Self-Refl
4	m2	IL* Age 25/65	n.s.	n.s.	n.s.	n.s.	< ***	< *
5	m2	CL* Age 25/65	> **	> .	> ***	n.s.	< *	n.s.
6	m2	RL* Age 25/65	n.s.	> *	> **	< **	n.s.	n.s.
7	m2	Pre2008/Post2008	< ***	< ***	n.s.	n.s.	> ***	n.s.
8	m3	Gender M/F	n.s.	< *	n.s.	n.s.	n.s.	n.s.
9	m3	Married S/M	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
10	m3	Children 0/1+	n.s.	n.s.	n.s.	n.s.	> **	n.s.
11	m3	Perinatal 0/1	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.

Inequalities: LHS<RHS or LHS>RHS.

Significance: *** $p<.001$; ** $p<.01$; * $p<.05$; . $p<.1$; n.s. not significant

A number of observations can be made from the significant results in this table however the most important results for this study are in the Trainee column where there are two interactions with Age of high significance. The model predicts that at the opposite ends of actual trainee ages, 25 and 65, there were clear differences in the likelihood of respondents mentioning fellow Trainees as important influences in their growth and learning. The splits are illustrated in figure 4.35 (148) with the Age interaction for CL ($p=.00016$) and for RL ($p=.001$) supporting the intuition that younger trainees are more likely to learn from older trainees.⁷⁴ A substantial finding

⁷⁴ Technically the quantitative data here shows that younger trainees learn more. However qualitative responses indicated the connection to learning from older trainees: e.g. “We had quite a

here is that the predominant influence is in areas of learning in relationships (CL) and character (RL), with far less learning occurring in the area of ‘content’ and ‘skills’ (IL).

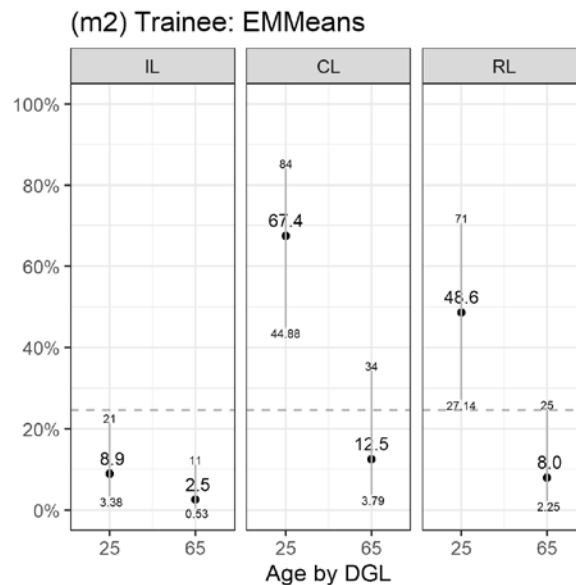


Figure 4.35. Influences on Areas of Growth and Learning (AGL-Infl) – estimated marginal mean probabilities of mention plotted for fellow Trainees from model parameters with 95% confidence intervals

Aside from these, and referring again to table 4.4 (147), in the IL dimension (row ID4) older trainees were found more likely than younger trainees to nominate personal Research and Self-Reflection as important influences, suggesting they might generally be using this time to engage in personal learning projects. Those who have trained in the cohorts since 2008 (row ID7) were more likely to nominate Staff and Mentor as important and less likely to nominate personal Research. The only significant imbalance for Gender (row ID8) indicates that women were generally more likely than men to nominate their Mentor as an important influence.⁷⁵

mature couple . . . who looked after us closely, and they taught us a lot . . . sometimes through direct advice and sometimes simply through their example” (Focus Group Interview, 2017). “Some of the people in our course were very capable, one even returning to SAH for a second time. I learned a lot from these people. Others were less so” (Survey Response – Trainees, 2017).

⁷⁵ A staff interview noted the gender divide in the Learning Groups, but also applicable to Mentor influence, such that “the male groups find [talking about hard personal or interpersonal issues] because I think they find it harder to be vulnerable and I think they’re generally less in touch with their feelings . . . so the male groups tend to, if we’re not careful, default into talking about academic issues” (Staff Interview, 2017).

There appear to be no significant differences in the importance of these influences across marital status (row ID9) or perinatal status (row ID11). Those with accompanying Children (row ID10) were less likely to nominate personal Research as an important influence, in line with the qualitative feedback of limitations on time and energy.

More detailed model outputs are provided for all four GLMM Trainee models together with basic results for all six influences, in Appendix 4.C.2 (323).

4.C.2.c Analysis of Comments for AGL-Influences

Aside from the Likert-scale responses, participants were also asked to comment on the learning value of each of the six influences. The predominant sentiment for each of these comments was coded by the researcher into one of four categories: *Positive*, *Negative*, *Neutral/Mixed*, and *Null/Don't Remember*. These categories were then tallied and are presented with the questions in table 4.5 (149).

Table 4.5. Comment sentiments about various Influences on Growth and Learning.

“What would you say about the learning value of ...”	Positive	Neutral/ Mixed	Negative	Null/Don't Remember
Interactions with TEACHING STAFF generally?	97	20	0	8
Interactions with your assigned MENTOR?	68	25	23	9
Interactions with FELLOW TRAINEES?	105	19	1	0
Interactions with people outside the SAH community? (e.g. cross-cultural friends)	94	22	8	1
PERSONAL RESEARCH?	91	24	7	3
Times of SELF-REFLECTION?	91	16	13	5

These distribution of sentiments support the quantitative data. Respondents tended to comment most positively about the influence of fellow Trainees and Staff, and least positively about Mentors. This tendency was true even when those pre-2008 were

removed from the data. Those with young children often noted their lack of time for personal Research.

Responses regarding the contribution of Fellow Trainees are presented in more depth. There were 105 positive comments coded, many without further explanation, 19 Neutral/Mixed, and 1 explicitly Negative comment, with no blanks (total n=125).

Although some saw 'limited value' in the interactions with others, the vast majority identified at least one aspect that had been helpful. Learning was referred to explicitly 41 times. A range of types of learning were explicitly identified which might be tentatively associated with the dimensions:

- IL: different perspectives and ideas (10), discussion (6), questions in class (1), and reinforcement or enhancement of understanding (4) (total 21).
- CL: identifying Community (11), Care or Kindness (4), Relationships (5), personal stories (2), and the importance of the cohort (7) (total 29).
- RL: character formation (2), spiritual formation (1) self-understanding (3), Maturity (4), and Growth (4) (total 14).

Many comments referred to the mode of learning, often just daily interactions, or the discussions over tea-breaks or meals. Several had had some hard kind of individual experience which was most often portrayed in the comments as a 'challenge' to overcome and grow through, or an opportunity to experience the help and support of others in the community. Some also referred to hard experiences that were shared by the whole or majority of the cohort and which might be tagged as developing a 'common bond of shared suffering' (CBOSS). Certainly there is something about the lived experience of being in community which entwines people together, particularly when passing through difficulties.

Responses about the learning value of interactions with fellow trainees included these:

“Amazing. As I'm doing this survey I'm realising how much I learnt in community, how much I learnt from my fellow trainees.” (trainees)⁷⁶

“Quite possibly the highlight. Lots of conversations and situations in which we grew together.” (trainees)

“Fantastically important because we had all been reflecting on the same things so could keep sharing based on conversations and material already shared.” (trainees)

It was also evident that the presence of fellow Trainees helped to integrate the learning in different dimensions, as reflected in this sample of comments:

“Important, for these interactions provided much motivation for acquiring knowledge and was the seedbed from which growth in character grew.” (trainees)

“A big part of the maturation process.” (trainees)

“Encouraging to spend quality time with so many godly people. Learnt so much through hanging out and talking.” (trainees)

“Learning in community is always a plus because it helps shape life, not just knowledge.” (trainees)

“This was where the rubber hit the road, and I really learnt and grew.” (trainees)

In summary, the qualitative evidence supports the quantitative estimates of the influence of fellow trainees. For many the experience of community, primarily with the other trainees, is a period of deep learning and fond memories.

4.C.3 Task 3—Other Evidence of Trainee Influence

Task 3 continued the exploration of how a trainee's growth and learning is affected by fellow-trainees during the course considering other quantitative and qualitative evidence from the survey. Only a limited investigation of the data was possible in this study so the analysis in this task was cursory with the possibility of further analysis in some future study. The bulk of analysis in this task thus considered

⁷⁶ (trainees) here and following indicates the survey question to which this comment responds.

quantitative data and drew initial observations about what might be interesting but without proceeding to detailed statistical testing.

4.C.3.a Correlations between Scales

The focus in earlier Tasks 1 and 2 has been on the chosen measure of development, Areas of Growth and Learning (AGL1). Other question sets were reported earlier but little has been said about interactions between them.

The following summarises material that is presented in Appendix 4.C.3 (337). The correlations between these question sets were examined in a graphical version of a large correlation matrix, Appendix 4.C.3.a (337).

First, along the lines of the model developed in 4.C.1 (141), simple aggregate scores were calculated for each of the three dimensions of AGL1: IL.sc, CL.sc, and RL.sc. Similarly, aggregate scores were calculated for most of the other main scales as follows:

- Overall Course Experience (OCE1.sc and OCE3.sc)
- Learning Community (LCS.sc and LCD.sc)
- Modes of Relationship (Staff-Trainee as MORS.sc, and Trainee-Trainee as MORT.sc)⁷⁷
- Tension and Conflict (TAC1 and TAC2⁷⁸)

The plot (figure 4.36, 153) presents a visual summary of the correlations between these scales with the three lines representing the three dimensions (IL.sc, CL.sc, and RL.sc) and the various total scores for each question set. All three scales show similar moderate correlations for Overall Course Experience scales (OCE1.sc and

⁷⁷ Aggregated scores for both MORS and MORT include reversed elements for Hierarchical and Priced responses as these items were clearly perceived as negative and overwhelmingly opposite in correlation to other elements. See Appendix 3.D.4.a for details of score calculations.

⁷⁸ The TAC2 questions represented diverse concepts and were not correlated with growth and learning as a group. Individually, the only element with a moderate correlation linked better resolution of the conflict with Reflective Learning (RL).

OCE3.sc) and for the Learning Community – Shallow (LCS.sc). However correlations of IL and CL with Learning Community – Deep (LCD.sc) show a larger gap below RL. The correlation between Modes of Relationship with Staff (MORS.sc) with IL is not as strong. Finally neither Modes of Relationship with Trainees (MORT.sc) nor Tension and Conflict (TAC1.sc) show substantial correlations to any of the dimensions of growth and learning scales.

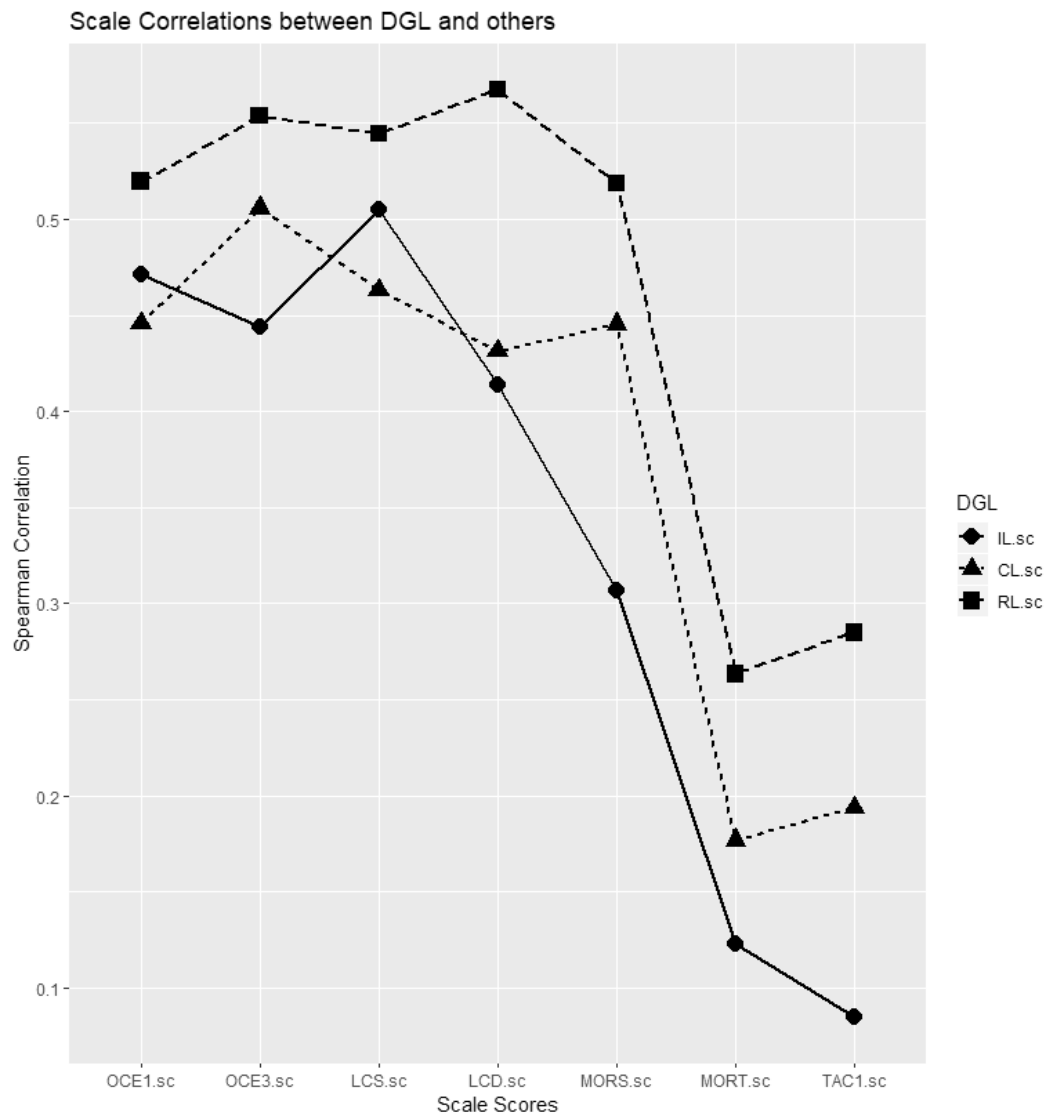


Figure 4.36. Scale Correlations of the DGL scores (IL.sc, CL.sc, and RL.sc) with scores from other scales (OCE1, OCE3, LCS, LCD, MORS, MORT, and TAC1).

The strongest correlations with individual questions within AGL1 were with OCE1.sc and OCE3.sc. In general, those who reported the most growth and learning also reported better overall course experiences. Some individual questions correlated

more strongly with one dimension than others however little was of particular relevance to the research questions.

The next strongest correlations with AGL1 were with the Learning Community scales LCS.sc and LCD.sc. Again, several individual question items correlated more strongly with one dimension than the others. Academic Interest correlated more strongly with IL, which makes sense. On the other hand, RL correlated more strongly than IL or CL with Membership and Belonging in the shallow scale and with a number of the deep scale entries, namely: Vulnerable, Trust, Closeness, Safe Learning, and Comfortable to Joke.

For the Modes of Relationship with Staff (MORS.sc), there were moderate to strong correlations with three of the four scales. Staff-trainee relationships perceived to be either Hierarchical or Priced were associated with lower reported levels of growth and learning on all three dimensions but especially on the RL. By contrast Staff-Trainee relationships perceived to be Communal or Matched were associated with higher reported levels of growth and learning, particularly with CL and RL. For the Modes of Relationship with fellow Trainees (MORT.sc), similar but smaller effects were found.

4.C.3.b Exploration of Tension and Conflict (TAC1 and TAC2)

An unexpected result was that the areas of Tension and Conflict (TAC1) showed almost no substantial correlations with any area of growth and learning. There was no correlation over 0.3 with any of the three dimensions. The interviews in phase 1 suggested that tension and conflict was a significant part of the course experience and an area addressed in modules of the formal curriculum so this was unexpected.⁷⁹

Two further steps were taken in this investigation relating to tension and conflict. First, the pattern of intra-set correlations for TAC1 suggested further investigation of the areas of tension and conflict. Some initial Exploratory Factor Analysis (EFA)

⁷⁹ This cursory exploration of correlations between question sets was done with the significance level set at 1%, a level which produced many correlations with most of the other question sets (4.C.3.a, 134). This might be a consequence of the weak strength of the data reported above (4.C.1, 123 and following 4.C.1).

was performed and suggested three to five clusters. A three-factor analysis suggested the clusters might be identified around: conflict over interpersonal differences; conflict over ideological differences; and conflict over power differences. This would be an interesting area for further work but could not be explored in the space limitations here and is not reported.

Second, correlations between the most significant level of tension and conflict experienced (max level of TAC1) and beliefs about tension and conflict (TAC2) suggested that people perceive, or perhaps remember, conflict quite differently.⁸⁰ Out of 36 cohorts represented, the vast majority (30 cohorts or 83%) had at least one person identify one or more areas of 'significant tension' and, where there were sufficient numbers from the same cohort, it was common to find that responses of different people ranged across four levels out of the six options. This limited analysis is provided in Appendix 4.C.3.g (351).

In general where a respondent reported higher levels of tension and conflict they also tended to report that: their cohort was more affected by conflict; it was not resolved satisfactorily; they believed that tension and conflict was more prevalent in other cohorts; and, it was more necessary.

Further investigation was not undertaken, as it was considered to be outside the scope of this study.

4.C.4 Task 4—Continued Contact

This research has aimed, secondarily, to assess the potential for communities of practice as a way to encourage ongoing growth and development. One option for such communities of practice would be to group them based upon trainee cohorts. If it could be shown that these cohorts are a naturally cohesive group which already perform at least some of the functions of such communities of practice, this would suggest this structure might be worth adopting. This section presents analysis of the

⁸⁰ A connection between this attitude to conflict and personality has also been suggested. Here the TKI measures might be of most interest.

formation of close friendships during the course as well as the post-course decay of those close friendships and continued contact. Given the data collected on friendships covering several decades, some further analysis was possible exploring the proportions and persistence of such friendships.

4.C.4.a Close Friendships—Formation

Statistics for the analysis of ‘close friendships’ are provided in Appendix 4.C.4 (354), specifically appendix table 4.34 (354). There were wide variations in responses. Typically trainees began their course having no close friendships with other trainees in the course. About 80% of trainees acquired at least one close friend from amongst the other trainees during the course, with the average trainee reporting they formed close friendships with about 48% of their cohort ($M=48\%$, $CI=42-54\%$). There was a significant gender difference in the proportion of close friends at the end of the course identified, with females nominating about 11% higher than male respondents ($M_{\text{female}}=53.5\%$, $M_{\text{male}}=42.8\%$, $W=1000$, $p=.05^*$). This is unlikely to be a true gender bias, instead reflecting a combination of homophily—since people tend to form non-romantic close friendships with others of the same gender—and opportunity—since there are almost always more female trainees in each cohort.⁸¹

Those who attended from 2008 onwards also nominated higher proportions of close friends at the end of the course ($M_{\text{pre-2008}}=37.9\%$, $M_{\text{post-2008}}=53.9\%$, $W=1000$, $p=.009^{**}$). This might be at least partly explained by the smaller average size of cohorts since 2008.

Another result compared proportions of close-friendships across DiSC profiles (see figure 4.37, 157). Those identifying as C, Conscientiousness, tend to nominate fewer close friends at the end of the course than the others ($M_{\text{DiSC-C}}=42.2\%$, $M_{\text{DiSC-other}}=58.8\%$, $W=200$, $p=.02^*$) and nominating almost 20% fewer than those who identified themselves as S, Supportive, ($M_{\text{DiSC-S}}=61.3\%$). No obvious explanation

⁸¹ If the parsimonious explanation advanced here were to be proven incorrect by comparing the numbers of males and females in each cohort with the numbers of close friends of each gender, then a secondary theory might consider whether a personality distribution effect was in play, for example considering the disproportionate numbers of male INTJs reported from earlier cohorts (4.B.8.c4.B.8.c 112).

arises for this and it was not of central relevance to this research. One might speculate on theoretical splits such as the task-orientation vs relationship-orientation or tighter vs looser boundaries on internal definitions of the category of ‘close friend’.

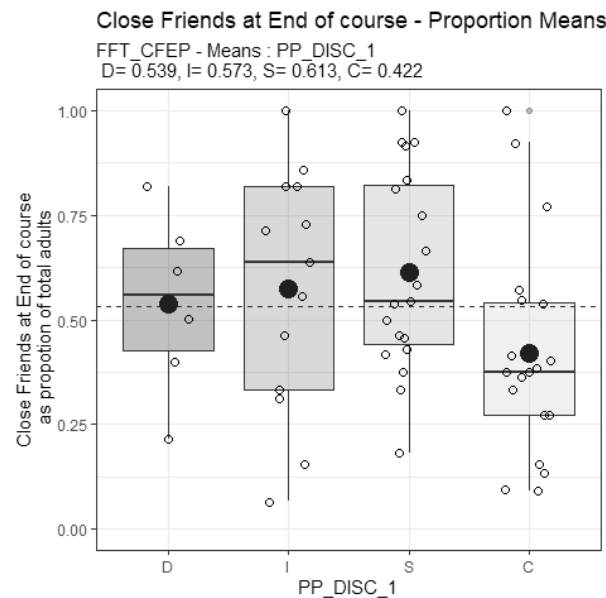


Figure 4.37. Close Friends at End of course-by DiSC preference (n=57). (Dashed line-overall mean for DiSC respondents, solid dot - group mean, open circles - responses, bar is median and box represents IQR)

No other differences appeared significant for the variables explored and further analysis was considered to be beyond the scope of this study.

4.C.4.b Close Friendships—Decay

Three different models (linear, exponential, and power-law) were examined for decay of close friendships. The more likely decay would follow power-law though exponential decay would also be feasible however no model accounted for more than 5% of the variance so there was no point in further calculation. In simple terms, and taking into account the wide ranges for standard errors, these models predict that after 1 year the average trainee will have retained 70-80% of their close friends from the course (CI: 63-99%) and at the end of 10 years the average trainee will have retained about 50% (CI: 37-95%) of those they considered close friends at the end of the course. For example, if there were originally 12 other adults in the course, the average trainee would leave the course considering about six to be close friends. After one year that number might be four and after 10 years it might be three.

In summary, although these relationships are possibly quite deep during the course, when clearly the factors of proximity and facilitated deep interactions are in effect, this quantitative analysis does not provide evidence to suggest that they are categorically different from other friendship relationships when these conditions no longer apply.⁸²

4.C.4.c Continued Contact—Decay

The main raw results on Post-SAH contact are presented above as part of Phase 2 (4.B.9, 131). This section presents the analysis of their decay over time. As for the analysis of close friendships decay, it is also possible to plot the frequency of contacts over time. These yielded very similar results to the analysis of close friends. Some decay in frequency of contact over time was found, as would be expected. Taking a simple measure of the most frequent contact for any topic, on average after one year contact is monthly and decays to about quarterly by six years, and is predicted to be close to annual by 30 years.

The plot for the frequency of contact for sharing news about each other's families shows this typical pattern of drop-off (with LOESS⁸³ smoothing) but also shows that wide variation of reported contact, figure 4.38 (159).

⁸² A comparison may be made with Sam Roberts and Robin Dunbar's study of adolescents in transition from school to university or work over an 18 month period (Roberts and Dunbar 2015). They confirmed significant increases in 'emotional closeness' of relationships with 'kin' contrasting with significant decreases with 'friends'. This decrease was most pronounced for those taking up university studies, a major life transition event, whether they stayed in their home town or moved town (2015, 444–47).

⁸³ LOESS = locally estimated scatterplot smoothing

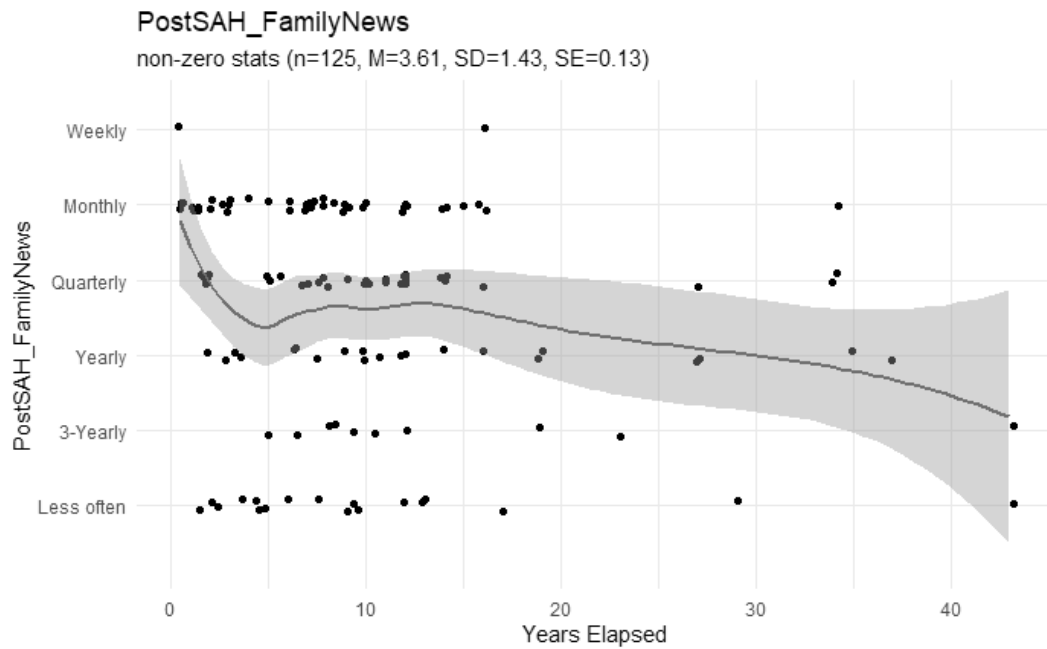


Figure 4.38. Longitudinal plot of post-course contact for sharing Family News

4.C.4.d Summary of Continued Contact

The main results from these post-SAH questions were presented earlier (4.B.9, 131). This further analysis of close friendships and continued contact has assessed whether the friendships formed during the course are particularly long-lasting. Former trainees report close relationships and there is evidence to suggest that the conditions at SAH do facilitate deep sharing and close friendships. However, no evidence was found to suggest that these relationships form and decay in substantially different ways to other friendships subject to similar external factors.

4.C.5 Phase 3 Summary

This section has presented the more complex quantitative analysis performed based mainly upon correlations within and between sets of questions. The model developed for Dimensions of Growth and Learning (DGL) appears to be feasible and useful. This model has then been used to investigate the way in which various influences on growth and learning vary in their contributions, not just in overall amount but in their differential bias across these three dimensions. Further investigation of correlations between question sets has revealed some of the ways in which learning communities and relationships might be substantially impacting learning in these areas. The area

of tension and conflict was also investigated and despite some internal observable structure, the educational effect appears ambivalent. Finally, attention was directed to the nature of close friendships after the course and assessing whether these cohorts might form the basis of long-term communities of practice.

This chapter has presented the results of the various investigations arranged in the order of the three phases of this mixed methods study.

The next chapter discusses the results more generally and with reference to literature presented in Chapter 2.

CHAPTER 5

DISCUSSION

This chapter draws on the research project results in dialogue with the various theories presented earlier to explore the role of fellow trainees in growth and learning both during their course and afterwards. The chapter is divided into three parts.

The first part discusses findings about general factors that were considered to affect growth and learning.

The second part considers the first three research sub-questions which concentrate on growth and learning during the course. It explores the three dimensions of growth and learning that have been developed during this study and considers each dimension separately with a focus on the contributions of fellow trainees to growth and learning.

The third part looks at the final research sub-question relating to how former trainees from the same cohort might contribute to ongoing growth and learning after the course.

5.A Discussion of General Factors

This section discusses the major findings about factors that contribute to growth and learning generally. These include the overall course experience, learning communities, modes of relationship, tension and conflict, transformative learning, and the relative contributions of six influences.⁸⁴ The model of three dimensions of growth and learning (Instrumental Learning; Communicative Learning; and

⁸⁴ Although not explored explicitly, examination of the large correlation matrix (Appendix 4.C.3.a, 302) suggests that these could be part of a chain such that the modes of relationship adopted by staff and trainees contribute positively or negatively to the closeness of learning communities which in turn contributes to perceptions of the overall course experience and this has the greatest impact overall on perceptions of their growth and learning. So, overall course experience, as measured in this study, is not identical with areas of growth and learning but there is a connection. The educational implications for this 'chain' of connections may well be worth further exploration.

Reflective Learning) is explored in the next section (5.B) but at various points in this section these three dimensions and specific research questions are referenced.

5.A.1 Overall Course Experience

This study found that those who reported good overall course experiences tended to report higher levels of growth and learning (correlations between the OCE1 and OCE3 scales and each of the DGL scores ranging 0.44 - 0.55 all $p < .001$). Whilst most items in these sets were 87-90% positive, only about a third of respondents reported their time to be 'easy' with almost 42% disagreeing. This item, 'easy', did not correlate positively or negatively with anything obvious with respect to areas of learning (.05 – 0.13). Overall, this suggests that the course is well-regarded but also stretching. Respondents regard the course as balanced slightly towards training and preparation rather than assessment and selection. They had a range of opinions about the balance between a fixed curriculum and individual training needs.

5.A.2 Learning Communities

This study confirms that the Learning Communities established for each course play a crucial role in growth and learning. Teaching staff recognised the importance of this role and observed that they carefully consider:

Not just what the content is but how you ... create a learning environment ... and that's the side that I think is undercooked massively in theological education and that we've given a lot of thought and attention to. (Staff interview, 2017)

Staff explicitly refer to the educational philosophy of Parker Palmer (see 2.C.8, 30) and work hard to establish the norms of the Learning Community so that it is a safe group amongst whom participants feel they can be vulnerable and thus engage in discussions which might challenge unexamined beliefs. As part of this intentional approach, in the first two weeks, all members of the community share a short version of their life story with staff members modelling openness and vulnerability. Staff noted that creating a safe place for deep personal sharing "is a really big issue because if people don't feel safe then what they'll do is give you what they think is the theologically correct answer" (Staff interview, 2017).

Many of the elements proposed by Piercy have also been incorporated, though he was not identified as a theorist used by staff (2.C.8, 30).

Staff also regard it as crucial for the course to be residential as it helps to set up the *communitas*. This insight draws on Victor Turner's understanding of rites of passage (see 2.C.2, 25). Within this *communitas* staff look for ways to deepen this experience early, both by concentrating on that deep sharing in the first two weeks and generally encouraging all kinds of casual interactions. Since this research began, new facilities have been in construction and it was noted:

One of the things we talked about with the architects is how you have community space where people have to encounter each other. (staff interview 2017)

The value placed on residential community has also come from the negative experience of a time when trainees could not all be accommodated on site. "I think one of the lessons from that is that you can't do community nearly so well if people are scattered and not all living in the same space and eating in the same space" (Staff interview, 2017).

The conception of the course as a liminal period, during which all are drawn into a *communitas*, has implications. First, it establishes standards within the community, for example, that the kinds of relationships should be mostly egalitarian, a characteristic expanded upon in the next section (see 5.A.3, 164). Second, it provides for a sufficient level of separation from normal life so that important kinds of growth and learning may occur. A clear majority of respondents agreed that this level of separation was appropriate.

Referring again to Parker Palmer, the teaching staff are conscious that they are deliberately "creating communities of trust . . . in which obedience to the truth can be practiced" (Staff interview, 2017). By their personal vulnerability (mentioned above) and the norms and standards of relationships they model and encourage, the shape of community is presented in such a way that engagement means extending those norms and standards, those ways of relating, into the intra-cohort relationships.

In the survey analysis, the correlations between the Learning Community variables and areas of growth and learning were reasonably strong (in the range 0.41 – 0.57)

suggesting that the Learning Community in general is having an interaction with, and presumably a substantial impact upon, this growth and learning. The fact that the Learning Community includes the teaching staff, mentors, and fellow trainees does mean that it is more difficult to separate out the effects that might be due to relationships solely between fellow trainees, but it is clear that such a community would be markedly different in character if those fellow trainees were absent.

Qualitative survey responses also strongly support these various points about living in such a Learning Community. For example, a very clear majority of responses (467/500 or 93%) challenged four proposals that this kind of training might be done in ways which would avoid aspects of this separation, namely: part-time, non-residential, online, or entirely avoiding the course.

5.A.3 Modes of Relationship

The set of four questions identified in this study as ‘modes of relationship’ were an exploratory simplification of the Relational Models Theory (RMT) of Alan Finke and Nick Haslam (see 2.D.2, 35). The results within the set suggest that that set of four questions did not adequately represent the RMT. Nonetheless, correlations for these questions have still provided some useful educational insights. First, higher scores in growth and learning were associated with those relationships in the community that were perceived to be more communal or matched and less hierarchical or priced (moderate correlations: 0.31 for IL, 0.45 for CL), thus moderately relevant to research questions SQ1 and SQ2. Second, the association between these perceptions of relationships and growth and learning was noticeably stronger in the RL dimension (correlation of 0.52) with more implications for research question SQ3.

Although no causal relationships were established, these findings are consistent with adult educational theory presented above (see Hibbert 2.E.6, 41). In simple terms, adults are likely to learn more in situations where their agency and experience are acknowledged and they are empowered to take charge of their own learning.

Combining these findings with the theoretical perspective of Giessner and van Quaquebeke (see 2.D.2, 35) suggests that, at least in this educational setting, the broad trainee expectation of normative behaviour is that both staff and trainees will relate to each other in a communal mode (CS) rather than a hierarchical mode (AR). The stronger association with RL, which is postulated to have stronger connections with character and ethics, suggests that hierarchical modes of relating might be interpreted as “unethical leadership” in this setting (Giessner and van Quaquebeke 2010).

It is an open question whether leaders, in this case teaching staff, could effectively head off such perceptions of unethical behaviour by managing expectations up front as Giessner and van Quaquebeke suggest (Giessner and van Quaquebeke 2010). This seems to be the approach advocated by Wan and Hedinger, in their advice to maintain a clear distinction between teachers and students (see 2.E.10, 45). Wan and Hedinger may be right in noting the danger that students trained in more empowering communal settings could find more hierarchical regimes more difficult to handle in their locations. Such an understanding might also have guided teaching staff in the past, seeking to prepare their students for the conditions they might meet in their future locations.⁸⁵

5.A.4 Tension and Conflict

The experience of tension and conflict was prominent in interview responses from both staff and former trainees. Staff anticipate it, and encourage trainees not to avoid it but rather to use it as an opportunity to learn through engaging. The course curriculum includes two modules explicitly dealing with conflict: Resolving

⁸⁵ Ming-Yeh Lee advances a similar idea arguing to consider the context of foreign-born learners who might find it difficult to engage with educational methods allowing more student freedom (Lee 2003). On the other hand, continuing to relate in such ways might perpetuate models of teaching that have generally been found sub-optimal even in situations where these hierarchical modes of relating might be the norm, as notably argued by Brazilian educator Paolo Freire (Freire 2000).

Everyday Conflict⁸⁶, and Cross-Cultural Conflict. Conflict is often discussed, particularly in Learning Groups and in the one-to-one Mentoring relationships.

The prominence of theological issues in perceived tension and conflict is not surprising amongst groups of those training for long-term missionary work as they may be challenged by what are often new perspectives at a deeply personal level. Some of these perspectives likely arise from the natural diversity from within Australia but teaching staff also present missiological perspectives that trainees are likely to encounter in their destinations.

Trainees in interviews sometimes reported finding that tension and conflict had been difficult however noted that in fact it had prepared them for later situations. Similar feedback was also found in the comments accompanying the survey responses. These examples recall Bonhoeffer's insight that a key benefit of living in community is the resulting disillusionment, both with oneself and with others (see 2.C.5, 28) at least partly because it drives one back to grace.

This *post-hoc* recognition of the applicability of course experiences appears to be typical and accords with the spiritual assumption offered by a staff member:

We believe very strongly that God puts together each group in a way that's handpicked and therefore if I'm not getting on with so-and-so they're God's gift to me right now so how do I actually grow with that. (Staff interview, 2017)

The quantitative results in the second survey section on tension and conflict also suggested that trainees did find value in this area of the course experience. The correlational evidence also indicated that those who reported the most tension and conflict during their course were more likely to regard it as: affecting their cohort, prevalent amongst other courses, unresolved, and yet necessary.

However, reported experiences were mixed. When asked about the levels of tension and conflict within their cohort, trainees within the same cohort reported widely

⁸⁶ This is a video course based upon the books by Ken Sande and Kevin Johnson (Sande and Johnson 2011; Sande 2004)

varying levels of tension and conflict. This range suggests that, at least when asked in overall terms, people perceive, process, and value conflict differently. The most major conflicts might have been kept private, or at least the magnitude of that conflict might have been shielded from others. Within a conflict, two parties might see the level of conflict differently; indeed this difference in perception might even be a common feature of conflict and contribute to escalation. More optimistically, people might have processed the conflict more or less satisfactorily, a line of argument developed by Miroslav Volf in *The End of Memory* where he suggests that “the non-remembrance of offenses endured is a gift . . . profoundly in sync with the nature of love” (Volf 2006, 175). There were also mixed attitudes as to how helpful such tension and conflict might be.

Given the attention paid to this apparently fertile ground of the experience of tension and conflict, it was surprising that overall the correlations with areas of growth and learning were not stronger and more statistically significant (see 4.C.3.b, 154).⁸⁷ This is puzzling, and several explanations can be proposed. It is quite possible that trainees learn things through these experiences of tension and conflict that they do not recognise as growth or learning at the time, and may not recognise it until much later, as in the case of the trainee referred to above who realised the appropriate learning during the interview. Another explanation might be that all trainees learn something about themselves and others but their experience is so varied that it does not correlate with the amount of tension and conflict. Whatever the explanation, the evidence, both in qualitative data and research on missionary longevity (Hay et al. 2006), suggests that the area of tension and conflict remains a crucial issue in such training and teaching staff are right to address it in multiple ways.

Interestingly in the survey, although conflict with staff has been identified in one question item and at times in comments, inter-generational conflict between trainees was rarely reported. This suggests it might be appropriate to review the inter-

⁸⁷ This was true overall, taking aggregate measures (total scores for the AGL and TAC question sets), as well as at the individual question level. Conceptually, it is plausible that the three dimensions of growth and learning identified in this study could well relate to the dominant issue clusters of tension and conflict noted above: ideological, interpersonal, and power differences 4.C.3.b, 136ff).

generational analysis of Donovan and Myers (see 2.E.5, 41). Perhaps the problems they predicted would be more noticeable in situations where the conflicting values are manifested in the dimension of ethics and authority, for example in the typical situation when one generation is in leadership over members of a following generation.

5.A.5 The Use of Psychometric Instruments

This study has noted: the long history of the use of psychological helps and assessment (see 2.F.1, 48, 4.B.8, 127), results of the analysis of various self-reported psychometrics (see 4.B.8, 127), and their use as a common tool during the course. Biases were noted in TKI (strongly towards high concern for relationship, weakly away from concern for issue, 4.B.8.a, 128), DiSC (towards S and C, and away from D, 4.B.8.b, 130), and MBTI (noting the possible bias away from Sensing (S) towards Intuitive (N) for males, 4.B.8.c, 130). These biases pose questions about their origin and consequence⁸⁸, however, seeking answers is outside the scope of this study.⁸⁹

Some research suggests “Intuitive leaders” might feel more at home in roles involving: “training people for ministry and mission; developing a vision and goals for the future” (Powell, Robbins, and Francis 2012, 7, citing research by Peter Kaldor and John McLean 2009). There is also a suggestion that Intuitive trainees might be at a slight advantage in learning languages (Moody 1988).

5.A.6 Transformative Learning

This research project initially explored the area of transformative learning and on the face of it there seems to be sufficient evidence that this kind of educational setting

⁸⁸ Given that instruments such as DiSC are explicit in noting their situational dependence, even if the results are valid in the training setting there are questions about the transferability of insights to subsequent settings. It is also easy to slip from ‘preferences’ to stereotyping, both of self and others.

⁸⁹ If it is true that the number of males identified in Myers-Briggs as INTJ is a real bias, this might have other implications for several features of the course such as a preference for personal research as opposed to group discussions. This is of decreasing relevance in the SAH course as the MBTI instruments have not been used for many years.

would include such learning. Evidence from the reported areas of learning, the qualitative comments accompanying the survey, and anecdotal observations suggests that indeed trainees change quite a lot during the course. For example, a part-time lecturer who had input into both this institution and the adjacent theological college is reported to have observed that SAH trainees change more in their five month course than those undertaking three years of theological study (conversation with staff member, 2019). This contrast is the more notable given that those attending the theological college would on average be about five years younger and presumably on steeper learning gradients.

However, little evidence arose from focus group responses to prompts which had been expected to evoke transformative learning themes, such as “the traumatic severity of the disorientating dilemma” (Mezirow 1981, 65) or unexplained emotional responses, that might indicate traversal along the 10-phase process (Mezirow 2012, 86). As noted earlier (footnote 66, 106) it was decided not to pursue a deeper level of questioning that might have elicited further specific evidence of transformative learning as this wasn’t necessary for the overall study and would have been inappropriate in the survey format.

Without specific evidence relating to transformative learning, this researcher is reluctant to affirm much beyond Newman’s observations about aiming for “good teaching” and “good learning” without being too hung up on advancing through a particular theoretical framework of stages (Newman 2014; Wall 2015, 43, 46). Perhaps it would be helpful to keep such a theory in mind while combining it with the ways in which teaching staff have already appropriated theorists such as Parker Palmer, and other Christian educators such as Robert Pazmiño (Pazmiño 2008), as they both develop the course content and repeatedly form the Learning Communities which support deep change.

5.A.7 Average Influences on Growth and Learning

An important area of quantitative analysis was estimating the contributions towards growth and learning of some six defined influences. The model to be reviewed below divided this up across three dimensions of growth and learning but it is also helpful to consider the overall contributions.

Taken as an average across the three dimensions, the relative contributions for this study⁹⁰ (rounded 95% confidence intervals) were estimated to be: Staff (22-27%); Mentor (9-13%); Trainees (13-17%); External Community (5-8%); Research (17-20%); and Self-Reflection (19-24%). This already suggests the magnitude of a broad quantitative answer to the main research question on the importance of intra-cohort relationships. Thus on average the modelling suggests that intra-cohort relationships between fellow Trainees contribute about 15% of overall growth and learning.

Such a quantitative answer is quite blunt as it does not indicate the areas in which influence of fellow trainees is greater or less, nor does it indicate the ways in which that contribution is provided.⁹¹ The next section summarises findings that sharpen understanding in these areas.

5.B Dimensions of Growth and Learning (DGL)

This part considers growth and learning during the course and the ways in which relationships with fellow trainees contribute towards each of the three Dimensions of Growth and Learning (DGL), namely, Instrumental Learning (IL), Communicative Learning (CL), and Reflective Learning (RL).

The goal of this research has been to identify how intra-cohort relationships with fellow trainees contribute to growth and learning in the context of a residential cross-cultural training course. It has been proposed that growth and learning might be

⁹⁰ The study methodology identified these six influences during the first phase as the ones likely to be most important in this setting. Obviously, without allocated Mentors such an influence wouldn't be relevant and educators should consider how that kind of influence could be replicated, perhaps by more focused personal learning tasks, or learning groups, or the explicit use of external mentoring resources.

⁹¹ This study also did not address interactions between influences. From a constructivist perspective one might simplistically say that new learning happens when a person engages in self-reflection upon some observation, perhaps from something said, something read, an incident, or an emotional reaction. In this conception of the influences, the external input might arise from one or more of: Staff, Mentor, Trainees, External Community, or Research. However, this study assumed that respondents would understand 'Self-Reflection' as a more conscious or even intentional activity. Given the frequencies of mention, both individually and in combination, it seems this intent was understood and the data here could not separate out this 'conscious' self-reflection from the less obvious reflection that is a natural part of learning.

usefully conceived of in these three dimensions. Chapter 2 provided foundational support for the idea of three areas of growth and learning through the literature on their philosophical roots, adult education, and studies in university education settings. The review of missionary training in general and organisational materials in particular demonstrated that these areas have been considered important over a long period of time.

This research has aimed to explore how such intra-cohort relationships are important to development in these three dimensions. The first step has thus been to build a model which can distinguish these dimensions and estimate growth and learning in each, at least with respect to the others. Nine questions, arranged with three questions for each dimension, were chosen through a model refinement process to represent growth and learning which emphasises the respective dimensions of Instrumental Learning (IL), Communicative Learning (CL), and Reflective Learning (RL).

Statistician George Box wrote, “All models are wrong but some are useful” (Box 1979, 2). This model is relatively simple and the results of this mixed methods research suggest that it is feasible. It is hoped this might be useful in conceiving and communicating further training approaches.

5.B.1 Instrumental Learning (IL)

The present study has defined Instrumental Learning as “learning about the world and how to manipulate it” (2.G.1, 53). The learner approaches some area of content as subject to object. Thus IL is ‘objective’ learning, where there is some ‘content’ which can be defined and which is substantially the same for each learner.

The discussion in this section relates particularly to research question SQ1.

5.B.1.a Model Questions for IL

The model refinement process (see 4.C.1, 141) identified three question items more closely related to IL:

- “learning about my intended location (politics, history)”;

- “pursuing research interests”; and
- “understanding cultures, religions and mission”.

Several other question items could have been included in this area but were removed in the model refinement process as they appeared to load significantly onto more than one dimension. So these three question items should be understood not as defining the limits but as typical examples where IL is clearly stronger than CL or RL.

5.B.1.b Contributions of Influences to IL

For each of the above questions, respondents were asked to nominate up to three influences that were important to their growth and learning. These were processed to obtain measures of the relative contributions of the available six influences towards Instrumental Learning (IL) as represented in the following chart, figure 5.1 (172).

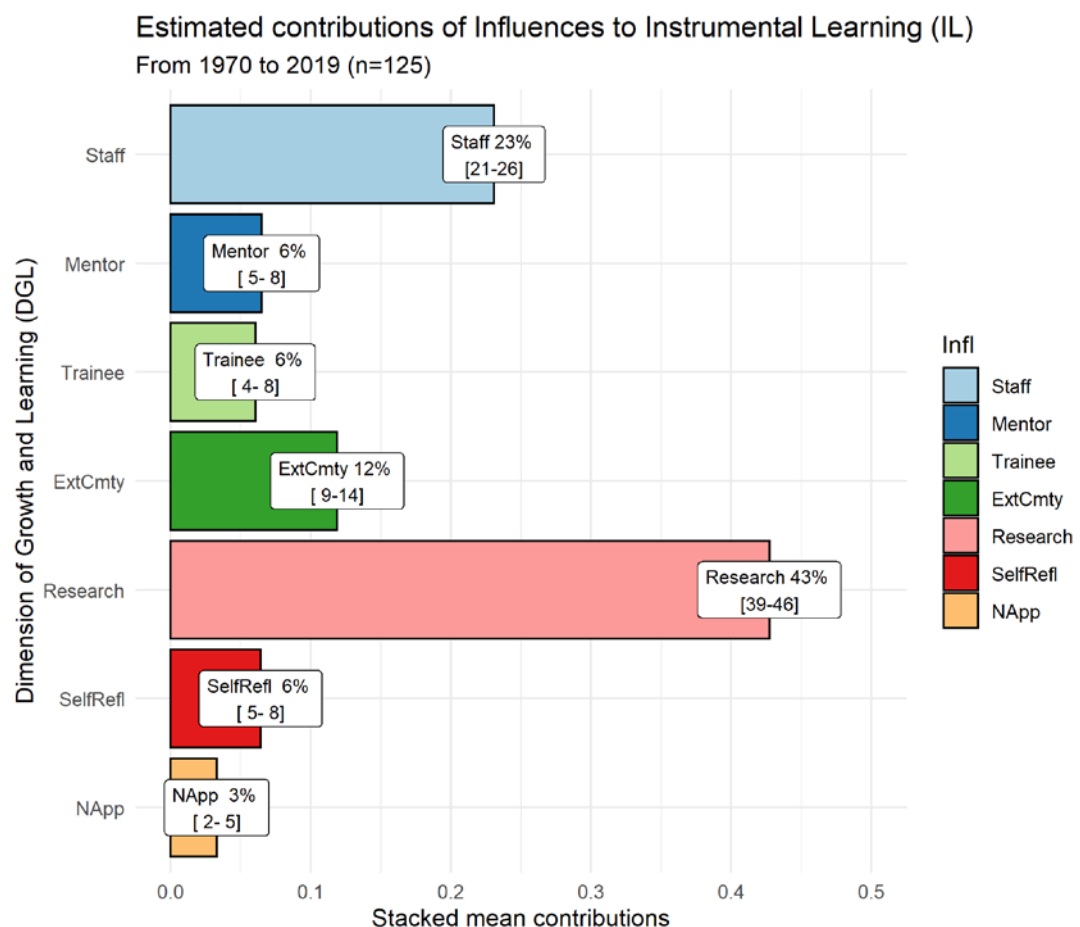


Figure 5.1. Estimated Contributions of Influences to Instrumental Learning (IL) with 95% confidence intervals

The analysis suggests that for IL, there were two dominant influences, namely, personal research (contributing around 43%), and teaching staff (in this model contributing around 23%). Participants almost without exception have completed tertiary study prior to their SAH training and can be considered to be reasonably capable of independent study. In addition, two of the three questions chosen in this model are essentially personal research assignments. So it is not a surprise to see the high contribution of personal research. It is also noted that this course often comes at a time of life when participants have particular questions of personal interest that they would like to investigate. This study has thus provided further endorsement of long-term organisational principles that individualise learning programs (as noted throughout section 2.F, 48).

In IL, teaching staff are also seen to be an important influence, with many trainees accepting staff input as a source of knowledge and understanding. Several of the other questions not chosen showed that staff influence was very high. So overall the chosen model is underestimating staff influence. The relationships that exist between teaching staff and trainees are not the focus of this study though they are clearly important in the transmission of a body of knowledge and other influences can be measured against this benchmark. Insights from focus group interviews provide evidence to confirm the importance of the teaching staff. By contrast relatively few mentions were made of trainees teaching or learning from other trainees in the explicit areas of knowledge which characterise IL.

The analysis of influences (see 4.C.2, 143) confirmed that Staff were indeed important influences. However, it showed that their contribution was actually broader across all three dimensions.

5.B.1.c How Fellow Trainees Contribute to IL

In the areas of Instrumental Learning, fellow trainees were not found to be very influential. They were rarely seen as sources of relevant knowledge and skills, and estimated to contribute only 6% to growth and learning in this dimension. This was in line with expectations from focus group interviews. Interviewees struggled to think of times they had learnt directly from another trainee, for example where one trainee took the main teaching role in the classroom, except in relatively minor ways,

such as passing on a handy practical skill or through a presentation of a research project which may not have been of direct relevance to the listener.⁹²

Adopting the role of ‘presenter’ in the preparation and presentation of novel material probably enhanced that learning for the presenting trainee, but the effect of presenting before an audience of one’s peers is hard to measure in this situation. Questions along the lines of social facilitation⁹³ effects did not suggest any worthwhile investigation. This absence might be explained by the fact that in this kind of group most trainees would already have been reasonably comfortable in public speaking and being in an environment in which trust has been built over weeks before such presentations are to be given.

Given the well-educated backgrounds of trainees across a range of disciplines and the reasonable spread of age and experiences, this lack of influence of direct teaching and learning was mildly surprising. Anecdotally it is likely that this store of life experience and expertise is being tapped in class discussions but Elizabeth Hibbert’s advice is perhaps more active, to “hand over the teaching of different areas to trainees who have experience in those areas” (E. Hibbert 2006, 56).

Overall, it seems that the majority of influence that other trainees contributed towards IL was when the one learning was in a role of ‘interlocutor’ or ‘observer’, either participating in or observing/overhearing conversations around areas of learning. Such modes of engagement were frequently mentioned in interview responses and survey comments referring to the ways that discussions spilled out into the dining room, weekly duties and casual interactions, such as “talking things over during meals and socially really helped to clarify and cement ideas” (survey response). However, former trainees responding to the survey questions on influences don’t appear to have recognised that their fellow trainees were

⁹² Whilst teaching staff identify that many trainees change fairly substantially during the course, it seems that other trainees mainly contribute to this more in CL and RL.

⁹³ In educational psychology, social facilitation recognises that one’s awareness of the presence of observers affects one’s performance of a task. The effect is dependent upon whether the task is simple and/or well-learned, in which case performance is enhanced, or complex and/or novel, in which case performance is diminished (Gilovich et al. 2013, 456).

contributing as part of the informal or hidden curriculum, or, if recognised, they might have attributed the effectiveness of these activities to the training staff.⁹⁴

The ability of trainees to explore their academic interests in the learning community was found to be most important for IL. Combining this with the qualitative responses suggests that for IL discussions have an important role both in the formal class time and as they continued around meals and duties. These findings are also in line with Boyd's observations (see 2.F.6, 52).

5.B.2 Communicative Learning (CL)

Communicative Learning (CL) has already been described as getting on with other people (see 2.G.1, 53). The learner approaches an 'other' as subject to subject in a healthy reciprocity. Thus CL is 'inter-subjective' learning, recognising the particularity of the interaction pair and acknowledging the potential for bi-directional conscious intentional influence. In other words, "this other person is someone I can 'know' in some way and who can influence me, just as I might influence them."

It is important to contrast this 'inter-subjective' mode of interaction between two people with a way of working with others that does not respect the other's agency, their interests, or allow the possibility of their mutual influence. This alternative way of working with others 'instrumentally' would tend to be perceived as manipulative, selfish, and/or immature, even Machiavellian.

The discussion in this section relates particularly to research question SQ2.

⁹⁴ Perry Shaw has written on the importance of recognising the hidden curriculum in theological education generally (P. W. H. Shaw 2006). A more recent book of articles compiled for theological educators in the majority world also has an article by Allan Harkness (2018)

5.B.2.a Model Questions for CL

The model refinement process (see 4.C.1, 141) also identified three question items more closely related to CL:

- ☐ Understanding how I relate to others
- ☐ Developing skills in conflict resolution, and
- ☐ Understanding myself and personality preferences.

Other question areas could also have been included under Communicative Learning, for example “managing family transitions”, but these three seemed to be the best exemplars from the data analysis.

Although the initial assumption was that personality preferences would be more closely aligned with Reflective Learning (RL), this alignment with CL makes sense. It is true that we might think of these tools as telling us something about ourselves, but predominantly they are in contexts in which we are relating to others. For example, one DiSC tool portrays itself on the front cover of the instrument as “a plan to help you understand yourself and others”, and further notes the qualification of doing so “in a specific environment” (Inscape Publishing 2001). Similarly, the MBTI framework helps one locate oneself in one of the 16 types but the four polarities deliberately set up a mental model to help one understand the kinds of ways in which others might be different or similar. The TKI framework helps one understand one’s own preferences in dealing with conflict – something which inherently assumes both the presence of an ‘other’ and the implied need to get along with that other.

5.B.2.b Contributions to CL

For each of the above questions respondents were asked to nominate up to three influences that were important to their growth and learning. These were processed to obtain measures of the relative contributes of the available six influence towards Communicative Learning (CL) and are represented in the following chart, figure 5.2 (177).

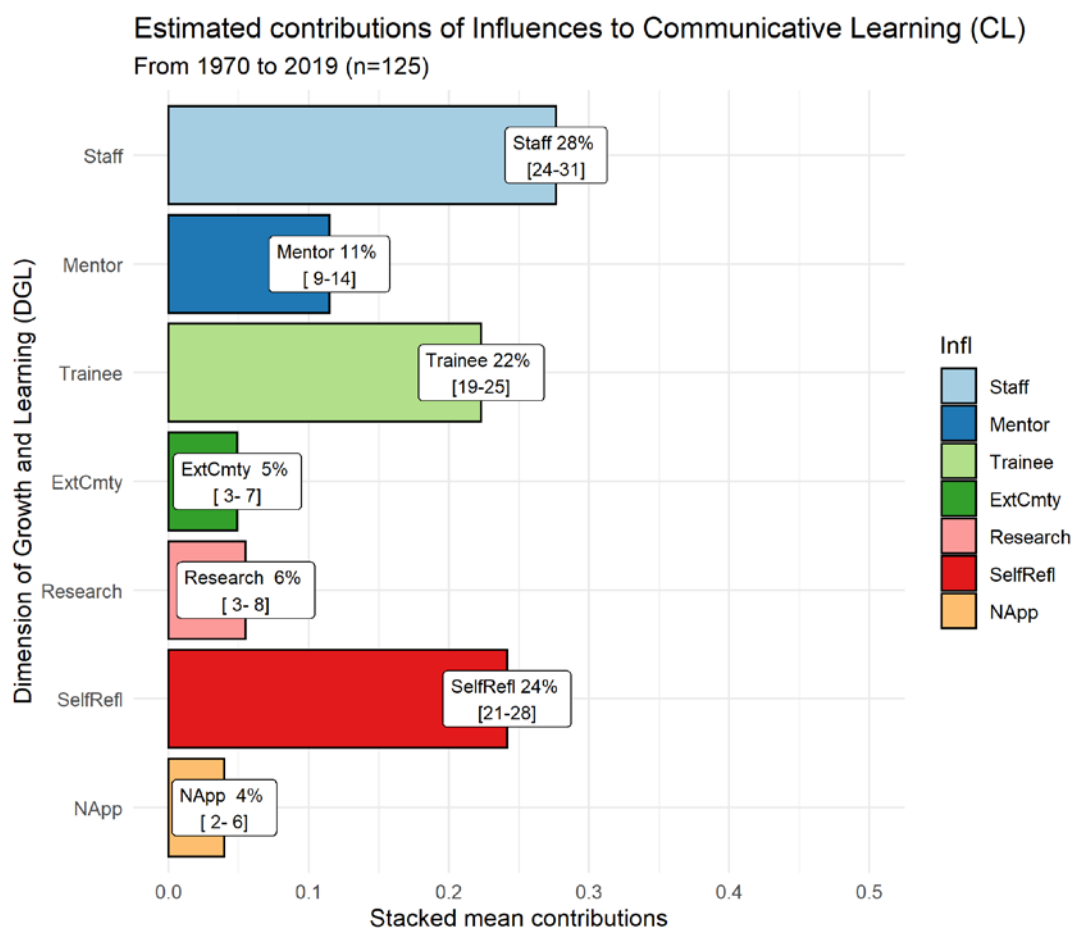


Figure 5.2. Estimated contributions of influences to Communicative Learning (CL) with 95% confidence intervals

The strongest four contributions to Communicative Learning here were identified as teaching Staff (28%), Self-Reflection (24%), fellow Trainees (22%) and Mentors (11%).⁹⁵ Teaching Staff was the highest influence in CL so those relationships will be detailed here.

Four broad levels of staff-trainee relationships set up during the course time clearly impact in this area, and in Reflective Learning (RL) as well. First, there are the obvious community-level relationships from being present in the same space for considerable periods including lunches and breaks. Second, there are the normal

⁹⁵ The role of self-reflection in any new learning has been noted generally earlier (footnote 91, 152), however Self-Reflection appears to be recognised as an explicit influence for CL and RL. It has been commented to the researcher that such “self-reflection is the ‘essential ingredient’ that enables other strong influences to enable growth and learning” (personal communication by examiner).

teacher-student relationships of the classroom. Third, there are smaller ‘Learning Groups’ in which one staff member takes on a facilitator role with a group of trainees of the same gender and in which the topic areas are more deliberately focused on interpersonal relationships (CL) or self-reflection, character and spiritual formation (RL). Finally, there are one-on-one relationships in which a staff member in the role of mentor spends time with an individual trainee and in which these areas can be explored in even greater depth. In the analysis here, the last of these has been separated out as a separate influence.

When asked about intra-cohort relationships between trainees, the influence in this area is stronger, contributing about 21% of overall learning. For the question asking for important influences on the topic of “how I relate to others”, fellow trainees were mentioned by 65% of respondents.

5.B.2.a How Fellow Trainees Contribute to CL

Communicative Learning was expected to be the area in which the presence of intra-cohort Trainee-Trainee relationships would have the most impact on learning so it was reassuring that both quantitative and qualitative results supported this. The influence of Fellow Trainees was found to be biased toward the area of Communicative Learning with an estimated contribution in this dimension of 22%.

This relatively high contribution supports the qualitative findings of the focus group interviews. Those interviews suggested that close relationships are formed during the training and they elicited a rich set of ways in which these relationships impact learning, particularly CL and RL. First, trainees are often brought together from a similar life situation, whether young or old, singles, couples and families with children. Second, those training are united by experiencing a similar set of transitions in ‘becoming a missionary’ including the preceding candidate processes, the training itself, and the prospect of similar experiences in deputation, transition to assigned location, language learning and the rest of their first three year tour. A more intense manifestation of this shared experience might be termed the *common bond of shared*

suffering (CBOSS)⁹⁶ which appears to bring people together in all sorts of difficult situations but here it might be ascribed to several factors such as: living in close proximity; relatively cramped and basic facilities; the schedules of classes and other activities; communal meals; duty rosters for cleaning up; and weekly maintenance chores around the property in smaller teams.

The marked negative correlation of learning in this area with the age of trainees reveals the unsurprising result that younger trainees generally learn more in this area than older trainees. Older trainees come with decades of life experience and have often spent a substantial time in ministry which is inherently inter-relational. Younger trainees are likely learning a great deal more about themselves in this period of intense community and, importantly for this research, they are likely learning a lot from those same older trainees. This was also clear qualitatively from both interviews and survey comments where participants identified their appreciation of fellow trainees for such things as relational wisdom and parenting advice⁹⁷.

A repeated theme through the focus group interviews and survey comments was that the intense community experiences, complete with tensions and conflicts and hardships, are explicitly set in a higher context: “This is how God shapes us ... through relationships ... through a lot of the rough edges” (focus group interview).

Psychometric tools have been mentioned earlier, primarily noting preferences as a sub-population at the level of demographics. However, their use is integrated into the whole SAH course and these frameworks also contribute important mental models and shared language which can be used by the learning community to discuss and learn complexities of interpersonal relationships. This is similar to Peter Senge’s conception of the learning organization in which a team of managers might commit to learning a set of common tools to facilitate their functioning together (Senge 1990,

⁹⁶ I am indebted to Andrew Buchanan’s expression of this concept several decades ago and have found no older reference.

⁹⁷ Parenting advice is a particularly sensitive subject and both personal communications and qualitative responses suggest that vast resources of experience in this area often remain relatively untapped by younger trainees.

pt. III especially Ch. 10 Mental Models and Ch. 12 Team Learning). The researcher has often noted a trainee referring to themselves or someone else as an ‘X’ within the DiSC model as a shorthand description of that person’s personality. These models are used throughout the course so in a very real sense, trainees are learning the different types experientially through constant interactions. “The fellowship with other trainees provided something of a visual aid or laboratory experiment (!) for the things we were studying” (survey response). Similarly as trainees go through the almost inevitable tension and conflicts, they are learning how they and others approach that conflict in the TKI grid (4.B.8.a, 128).

With any such categorization there is the risk of stereotyping. In practice this seems to be somewhat mitigated here by the fact that it is a shared activity, in which both staff and trainees participate, and by the ways that power differentials within the learning community are levelled in various ways, including by such models. Whilst a small proportion of trainees find such models of little or no use, or even antithetical to Christian training, more than 75% reported that they have found them to be useful.

5.B.3 Reflective Learning (RL)

Reflective Learning is thought of in this research as character and spiritual formation. Thus RL is ‘subjective’ learning, primarily concerned with the inner life of the learner. Located in RL are the spiritual relationships of ‘faith’ and the space for ethics that one might term ‘character,’ encompassing matters of will and volition.

The life of ‘faith’ is also a life of faithfulness, recognising both accountable autonomy and the limitations of both power and ability. The activities of character formation engage with ethical demands, with the exercise of the will, with the awareness of power and weakness, and the right exercise of, and submission to, authority. These activities also enable honest assessment of oneself, learning to recognise one’s limitations, not only physically and emotionally, but possibly also in areas of temptation. Honestly reckoning with these areas is a pre-requisite of appropriate self-care and of ministry to others. Similarly, one’s relationship with God is not that between equals, but in a very real sense it is of client to patron in the type of “grace relationship” in which the appropriate stance is unwavering loyalty in grateful response to beneficent grace (DaSilva 2000, 154–56). Many of us,

particularly those who have been immersed in cultures characterised more by “contractual relationships” (2000, 121), often find this a very difficult area of growth and learning.

The staff interviews identified “what we’re trying to do here is create reflective practitioners” (staff interview, 2017) by which they mean people who have learned “how to learn, and grow and change and reflect” (staff interview, 2017). The use of the term ‘reflective’ is possibly confusing and there is certainly at least overlap for the role of ‘reflection’ in any activity of life. The very clear differences between the activity of ‘research’ and ‘self-reflection’ in talking about influences shows that in general trainees associate ‘self-reflection’ with RL and to a lesser extent CL. However, it might be appropriate to relabel this dimension in the future, possibly as Formative Learning (FL).

The discussion in this section relates particularly to research question SQ3.

5.B.3.a Model Questions for RL

The model refinement process (see 4.C.1, 141) identified three question items more closely related to RL:

- ☐ “strengthening good habits and spiritual disciplines”
- ☐ “deepening my relationship with God”
- ☐ “taking care of myself”

There was also an association with the question item “understanding Bible and Theology” however this item was loaded across all dimensions so was not included in the RL dimension. This is consistent with both the organisational importance of this area and the goal that the course be a time of reflection and integration of biblical models into all areas of growth and learning.

5.B.3.b Contributions to RL

For each of the above questions respondents were asked to nominate up to three influences that were important to their growth and learning. These were processed to

obtain measures of the relative contributions of the available six influences towards Reflective Learning (RL) as represented in figure 5.3 (182).

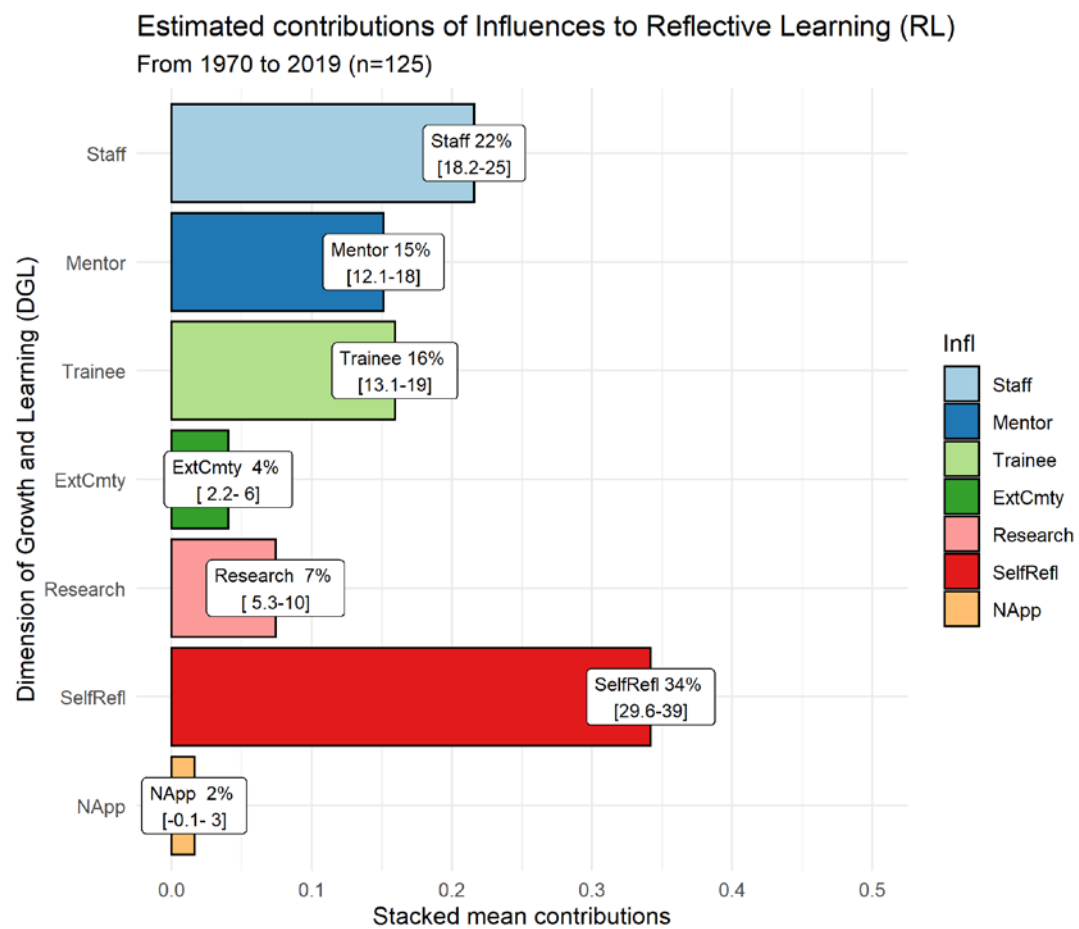


Figure 5.3. Estimated contributions of influences to Reflective Learning (RL) with 95% confidence intervals

The largest contributions to Reflective Learning were found to come through Self-Reflection (34%), followed by Staff (22%), Mentors (15%), and fellow Trainees (16%). Trainees are taking time to reflect upon their growth and learning during the course. Research and Self-Reflection, though both individual in nature, are clearly distinguished, with Research being associated with IL whereas Self-Reflection associated with both CL and particularly RL.

The Mentor's influence is strongest in RL. Prior to 2008 the explicit role of Mentor was not formal but since 2008 there has been a clearer understanding of that role to enhance self-reflection in trainees which explains these big differences between their

estimated contribution Post2008 (22%) compared to Pre2008 (3%). This contrast itself emphasises the value of the Mentor role, particularly in RL. This Mentor-Trainee relationship appears to function more as advanced discipleship⁹⁸, not so much as a teaching role but in these areas of character and spiritual formation.⁹⁹ Indeed this focus of the Mentor's role came across explicitly in staff comments such as: "we do things around spiritual formation in the formal part of the course but probably the biggest focus of that would be in the mentoring relationship" (Staff interview, 2017).

Discipleship in the New Testament is not set forth as the steady accumulation of knowledge and understanding so much as the conscious and willing submission of oneself to God and those legitimate sources of authority established by God. The risen Jesus commissions his followers to make new disciples, and emphasises this aspect of obedience over knowledge, "teaching them to obey everything I have commanded" (Matthew 28:20).¹⁰⁰ The portrayal of discipleship is of denying oneself, of carrying one's cross (Matthew 16:24; Mark 8:34; Luke 9:23), of considering others greater than oneself (Romans 12:10; Philippians 2:3), of serving one other (Galatians 5:13), and of submitting "to one another out of reverence for Christ" (Ephesians 5:21). For those seeking to live in such a way it is of great advantage to cultivate a resilient spiritual life and the character to remain faithful.

5.B.3.c How Fellow Trainees Contribute to RL

The quantitative evidence suggests that fellow trainees also make an important contribution in the area of Reflective Learning (RL). As seen for CL, younger

⁹⁸ 'Discipleship' often refers to the first few years after conversion during which an older Christian might help a new convert in the application of biblical teaching to their personal life. With the selection processes in place, most trainees at SAH are well past this period but the areas of life being addressed tend to be similar. In some circles the term 'spiritual direction' has more accurate connotations.

⁹⁹ Specifically, the role of Mentor is not currently linked to academic aspects of the course for example as 'supervisor' for the personal research projects of trainees.

¹⁰⁰ This expected outcome in action is consistent, e.g. Matthew 7:24-27; 25:31-46. Paul portrays the goal of his own calling framing the book of Romans with 1:5 and 16:26 as bringing about the 'obedience of faith' amongst the Gentiles.

trainees are learning substantially more from their (usually older) fellow trainees. The responses in focus group interviews and in the comments connected with the survey endorse this impression of learning in the RL area by observing the models of older and wiser heads sharing their relationship with God and modelling the Christian walk. For many trainees this was noted as a key time for maturation and it seems that a lot of the influence of that came in the informal times, “[it was] encouraging to spend quality time with so many godly people. [I] learnt so much through hanging out and talking” (survey response).

RL correlated strongly and significantly with deeper aspects of Learning Communities including feeling part of a group committed to learning and one in which one might feel safe enough to share vulnerabilities. In this area the concept of ‘closeness’ seemed particularly relevant, and which also corresponded to higher acquisition of close friendships.

The staff clearly give a lead in this area by modelling and establishing ground rules including group commitments to confidentiality which then mark the group boundary.¹⁰¹ They conceive of this community as a *communitas* in which trainees pass through a liminal period marked with rites of passage.

These aspects of community appear to differ slightly from those which promote CL. Whilst CL responses typically have the character of homophily—that people form friendships with those like themselves, because of their common background, interests or experience—the RL responses illustrate the character of community based more on mutual commitments and loyalty. RL learning is more deeply personal and subjective and perhaps there is also a recognition of the seriousness of work done in this core, recalling Gordon Smith’s advice to spiritual directors trusting “God to do God’s work in God’s time” (2.C.8, 30).

¹⁰¹ These actions by the staff in the creation and shaping of community signal that this is an intentional part of the non-formal curriculum.

5.B.4 General Comments upon Dimensions

Whilst the bias for Staff was not statistically significant, all other influences showed statistically significant bias over the dimensions. For example, personal research was clearly far more likely to be mentioned as important in IL compared to either CL or RL. On the other hand Self-Reflection was more likely to be mentioned as an important influence for RL or CL.

These models confirmed the expectation that the relationships with fellow trainees made a substantial contribution to CL and RL, but that the contribution to IL is likely to be much less. This supports the view that training in residential community has substantial benefit but also nuances such an answer by correcting any naïve supposition that it is of equal benefit to all types of learning, a result also in line with Smith and Bath's conclusions (2.B.2, 21).¹⁰²

An important corollary is that one cannot assess the full value of the learning community, or even its major contributions, by assessments which only measure IL, for example typical academic assessments. Educators should already be aware that when assessments appear to target only academic competencies,¹⁰³ the hidden curriculum may mistakenly signal to students that these more 'academic' subjects are what really matter (P. W. H. Shaw 2006, 87 and throughout; P. Shaw 2014, 79–91). It seems worth reflecting on what approaches might correct this message, given goals of growth in other areas, such as the ability to get on with others, particularly ministry settings.

¹⁰² These results are from a specific context, SAH, and the question areas assigned to each of the dimensions affect which influences were found to be more or less prominent. The low IL influence of fellow trainees found in this study might be sensitive to various factors such as: personal learning styles, specific learning tasks, and available roles. Nonetheless, it seems that the influence of trainees in IL is likely to be less than the other dimensions in most similar contexts.

¹⁰³ Admittedly, this is a simplistic generalisation. Brian Hill argues for the practice of 'teaching for commitment' which necessarily involves developing awareness as part of developing commitment (Hill 1985, 85–101 Chap. 5 Teaching for Commitment). The point made here though is that if the assessment should become separated from that higher goal of increasing commitment, the student tends to acquire knowledge disconnected from commitment.

Whilst it might be true that “learning is not primarily an individual endeavour” (Hoke 1995, 88) this study suggests that sometimes it very much looks like that. For example, learning appears to be individual when personal interest drives private research in the area of Instrumental Learning. On the other hand, whilst self-reflection might also appear to be private, that reflection would often arise from an interpersonal interaction and residentially based training provides a rich assortment of such interactions. The understanding of the areas of most benefit, brought to light for example by David Harley in relation to the Global Professionals Training Institute in Korea, are supported by this research, namely, “to develop relational skills and personal growth” (C. D. Harley 1995, 34).

The growth and learning in CL and RL appear to be particularly beneficial for younger trainees, presumably when they are mixed in cohorts with older fellow trainees. Indeed the presence of so-called ‘retreads’ is often noted to contribute a wisdom into discussions in various aspects. These age-diversity examples illustrate the concepts highlighted by James Samra earlier, that part of the church’s role in the maturation of the believer is “imitating a godly example” (2006, 168). More generally such interactions might be seen as extensions of the intergenerational (IG) learning highlighted by Allan Harkness and might hint at an important mechanism by which believers advance at the higher end of James Fowler’s seven faith stages, presumably allocating such learning to RL (Allan G. Harkness 2000, 60–61).¹⁰⁴

5.C Post-Course Influence on Learning

This final part of the chapter considers evidence for any continuing contribution of others from the training cohort on growth and learning of the trainees beyond their SAH experience. This area was investigated by considering the evidence for continuing relationships, the nature of such interactions, and the opinions of former

¹⁰⁴ This is not the place to discuss James Fowler’s Faith Development Theory but it is noted that further discussion can be found in the writings of Fowler and others (Fowler 2000; Dykstra and Parks 1986; Nelson 2004).

trainees on what has been or might be most beneficial in terms of more explicit communities of practice.

Overall the data on continuing growth and learning after the course proved to be disappointing. Some of the anecdotal reports that triggered this study had suggested that following the course many of the cohorts stayed in touch and that these mutual relationships were functioning in some way to encourage ongoing growth and learning. In addition it had been reported that cohorts regularly continued interactions in a semi-formal group gathered ostensibly to assist language-learning. It became apparent during this study that only one such language-learning group had ever functioned in this way and more generally there was far less ongoing communication within former cohorts of a nature likely to encourage ongoing growth and learning.

The discussion in this section relates particularly to research question SQ4.

5.C.1 Close Friendships—Formation

At the beginning of the course the typical trainee has no close friendships with other trainees. By the end of the course that average trainee will have made close friendships with about half of the other members of their cohort. It is likely, though this was not studied, that these friendships are predominantly with people of the same gender, males with males and females with females. This would also explain the slightly higher rates of close friendships at the end of the course for women (53.5%) compared to men (42.8%), (4.C.4.a including footnote, 156).

Other factors connected with the course appear to affect friendship formation with those in cohorts before 2008 reporting substantially lower proportions of close friendships (37.9%) than those from 2008 onwards (53.9%). It seems likely that the predominant modes of relationship might help to explain this variation though the different average cohort sizes might also be relevant.

It was also found that psychometric measures correlated with friendship formation, with the largest split between those who identified as DiSC-C reporting almost 20% lower than DiSC-S on average rate of acquisition of close friendships. This could be

a real effect or might also be explained by internally tighter definitions of ‘friendship’ by those who are naturally inclined to be ‘conscientious’.

5.C.2 Close Friendships—Decay

Following the course, these friendships continue but, as with other non-blood relationships, they suffer decay. The analysis of close friendship decay took advantage of the representation of some 36 cohorts spanning several decades to suggest a feasible pattern of friendship decay, broadly following characteristic power-law. This was a very rough analysis and the range of reported experiences very wide, from those who make no close friends to those who consider all other trainees as close friends and continue to regard them as such for decades. However, for the purpose of this analysis it has to be assumed that the 125 respondents are sufficiently representative over time and node-degree¹⁰⁵.

The main observation from the data is that, although former trainees often describe these intra-cohort friendships as particularly close, even as “friends for life,” they probably follow normal patterns of power-law relationship decay observed elsewhere. This accords with the findings of Sam Roberts and Robin Dunbar who studied friendship networks of university students and found that “simply feeling psychologically close to old friends does not prevent these friendships from declining in closeness over time” (Roberts and Dunbar 2015, 445). The rate of decay appears to be similar from an average of 48% of the cohort being considered ‘close friends’ to maybe half of these being considered close friends after ten years. Since these patterns of friendship formation and decay do not appear to be exceptional, there is no particular reason to believe they would be any better than other criteria as the basis of groups able to support further growth and learning.

¹⁰⁵ In social network analysis an individual’s ‘node-degree’ is the number of connections formed to other nodes in the network. In this case ‘node-degree’ is simply the number of close friends from within the same cohort.

5.C.3 Continued Contact—Decay

As a second area of evidence for relationship drop-off, participants were also asked how frequently they made contact with other members of their cohort for a small range of general areas. Drop-off in communications was observed to follow a similar trajectory to the general decay of close-friendships observed above, with a relatively rapid early drop-off easing to more gradual decline over about three to five years.

5.C.4 Continued Contact—Topics of Communication

A third area of evidence considered the topics upon which participants communicated or did not communicate. The most frequent communication tended to be for general family news or over some organisational communications. Contact to share resources, which might indicate encouragement to ongoing learning (IL), was less common. Contact for accountability, which might support character and integrity and thus aligning with Reflective Learning (RL), was also reported to be uncommon. From the perspective of the organisation, these findings might be a little disappointing, indicating little spontaneous encouragement towards further development from this source and possibly an area of need.

5.C.5 Communities of Practice

A fourth strand of enquiry expanded the investigation beyond the limits of the training cohorts and looked at participants' experiences of groups that might be considered communities of practice, whether current or in the past. This area would be a natural progression from the learning communities established during training and were also suggested as supportive of the concept of "reflective practitioners" that arose in staff interviews.

It was found that although a substantial proportion of participants had experienced such groups at some time in their lives, this was still less than half (~ 45%) and that current participation in such communities was reasonably low (~ 30%). There were substantial positive encouragements for the organisation to facilitate in this area, with almost 40% in agreement or strong agreement. However, there was also a large number undecided (44%) and the remainder in disagreement.

More encouragingly, a larger proportion would be keen to be part of such a group and some candidates ready to coordinate or lead such groups. There was a clear preference towards forming groups around the type of work rather than location or training cohort.

This choice of preferences suggests parallels to the university studies of learning communities at Hong Kong University. Those studies suggested two levels of learning community memberships that were important: first, wider groups that promoted social assimilation into university life; and, subsequently, a discipline-specific community which would bring them into the community of practitioners for that field and in which they expect transformative learning to occur (Leung and Kember 2013, 238).

The above evidence, from close friendships (5.C.1, 187, 5.C.2, 188) and continued contact (5.C.3, 189, 5.C.4, 189), suggests that SAH cohorts are not naturally transitioning into communities of practice once trainees move to location. The close friendships form but decay once the external factors are removed. Similarly, the frequency of contact decays and the main topics of communication suggest the character of interactions is primarily friendship and personal support with little evidence of encouragement to ‘continued professional development’ or mutual accountability.

On the other hand, further evidence, arising in one of the staff interviews, is that such communities of practice require some dedicated resources to facilitate meeting and learning. One current initiative is a multi-agency sponsored project in which women working amongst populations of another major religious group form a community of practice in an online forum. This kind of initiative does take significant resources of facilitation and a partnership of participants from several agencies to provide facilitators, infrastructure, and organizational motivation for these women to be able to participate. This suggests a return to the recommendations about communities of practice proposed by Richard and Evelyn Hibbert including the possible place for scholar-practitioners (R. Y. Hibbert and Hibbert 2014). Taking seriously the apprenticeship model characterised by Lave and Wenger (2.C.3, 26) reinforces the potential role for intergenerational interaction, though perhaps with some adjustments to recognise the potential for mutual learnings.

5.C.6 Summary of Post-Course Influence

To summarise the post-course learning section, an initial hypothesis that the apparently close and enduring relationships arising from training cohorts would be a good starting point for the establishment of communities of practice was clearly not supported. Close friendships and frequencies of contact show substantial decay over time. The types of communication currently in place—and presumably promoting social cohesion—would be substantially modified in an attempted conversion in the service of communities of practice, and the felt needs are clearly biased away from training cohorts and towards type of work.

In terms of the fourth research sub-question, which asked how intra-cohort relationships might continue to provide support and enhance learning, it appears that members of the training cohort might continue to provide some social support but probably have limited influence on continued learning in any of the three identified learning dimensions. Continuing contact appears to be primarily at the level of maintaining relationships, most closely aligned with the CL dimension. Whilst this in itself is no doubt supportive, it seems unlikely that there is significant growth or learning occurring directly as a result of this contact. There was even less evidence of the kind of contact with former training cohort members that might be related to the IL dimension, such as sharing resources or regular discussions about more theoretical subjects. Similarly there was little evidence that there was much support provided in the RL dimension, such as mutual accountability in matters of relationship to God, spiritual disciplines, behaviour, and integrity.

In fairness it should be noted that various processes within the organisation facilitate aspects of these areas of learning to a greater or lesser extent so involvement in these areas of each other's lives is not an explicit expectation on fellow member of a cohort. For example, self-care is formalised with each person drawing up their own plan. However, if the relationships during training had developed in a particular way, one might have expected to see some evidence that it was happening naturally as part of close collegial friendships even without such external encouragement.

The next chapter summarises the conclusions according to the research questions, discusses significance and implications as well as limitations and areas for further study. A few observations and recommendations for the organisation of interest are also presented.

CHAPTER 6

CONCLUSIONS

This chapter summarises the answers to the research questions which have guided this study. Observations about the significance of the findings and their implications are made. Limitations and areas for further study are noted. Finally, some organisation-specific recommendations are suggested.

6.A Research Questions

This study has sought to answer the question:

“How are intra-cohort relationships formed in an agency-based residential training course for cross-cultural workers important to the development of participants during the course and subsequently in the dimensions of instrumental, communicative, and reflective learning?”

These three domains or dimensions of growth and learning were identified in various fields, including philosophy, adult and tertiary education, psychology, and the training of missionaries both generally and within the organisation of interest (CMS-Australia). A model distinguishing growth and learning in these three dimensions has been developed and used to estimate the relative contribution of fellow trainees to growth and learning both overall and in each of these dimensions.

This study estimates that fellow trainees typically contribute of the order of 15% for this sample to overall growth and learning of trainees during the course. Important aspects of this influence are mediated through the overall course experience, the functioning of the learning community set up for each course cohort, and the predominant modes of relationships that exist within that community.

Four sub-questions arose from the main research question. The first three considered growth and learning during the course in each of the three dimensions separately, while the fourth considered how post-course contact influences continued growth and learning.

6.A.1 Sub-Question 1—In-Course Instrumental Learning

The first research sub-question asked:

“How do intra-cohort relationships contribute to instrumental learning of participants?”

Instrumental Learning (IL) was earlier described as learning about the world and how to manipulate it, as objective learning (2.G.1, 53). Examples identified in this research included learning about intended location, pursuing research interests, and understanding cultures, religions and mission. In this dimension (IL), the influence of fellow trainees during the course was found to be small, estimated to typically contribute only about 5-6% towards growth and learning amongst a group of six influences for this sample. That influence was generally not found to come through direct teaching, i.e. where one trainee took the role of class teacher, but more through in-class discussions which continue into less formal discussions over meals, in common duties and in casual interactions.¹⁰⁶

6.A.2 Sub-Question 2—In-Course Communicative Learning

The second research sub-question asked:

“How do intra-cohort relationships contribute to communicative learning of participants?”

Communicative Learning (CL) was described simply as getting on with other people (2.G.1, 53). Such inter-subjective learning recognises the potential for bi-directional intentional influence. Examples of this kind of learning identified included: “understanding how I relate to others”; “developing skills in conflict resolution”; and “understanding myself and personality preferences.”

¹⁰⁶ Other learning methods may increase the perceived value of fellow trainees in this area, but the question might also be asked whether it is necessary. If fellow trainees are not as helpful in IL then such learning might be accomplished in other ways, for example, online or time-shifted at personal convenience. This then leaves time for the CL and RL tasks that really benefit from the presence of fellow trainees.

The influence of fellow trainees towards CL during the course is estimated to contribute about 22% towards growth and learning for this sample. This is the highest of the three dimensions. This influence is carried by the relationships that form in this kind of learning community. Such relationships form as a result of both homophily and shared experiences. Homophily effects include common background, stage of life, aspirations, and common organisation. Shared experiences include the common situation with any challenges and shared sufferings. Intense learning about self in relation to others occurs in the presence of tensions and conflicts, although this study indicates that the connection between such tensions and growth and learning is ambivalent. The use of psychometric tools enhance this kind of learning, not just because trainees learn about themselves, but also because they are learning the different types experientially through constant interactions with their personality-diverse fellow-trainees.

A secondary way in which other members of the learning community contribute to CL is likely to be in their interactions (both positive and negative) with their peers which prompt self-reflection. If this is happening, then self-reflection, with an estimated contribution of 24% towards CL for this sample, might be considered to be a time-shifted proxy for the influence of other trainees, combined with the reflections on interactions with staff and mentors.

Another important aspect of the ways in which fellow trainees contribute to growth and learning is dependent upon age differences. In CL it was clear that younger trainees learn very substantially from older trainees, for example in relational wisdom and parenting advice.

6.A.3 Sub-Question 3—In-Course Reflective Learning

The third research sub-question asked:

“How do intra-cohort relationships contribute to reflective learning of participants (particularly in spiritual and character formation)?”

Reflective Learning (RL), especially as character and spiritual formation, is subjective learning, primarily concerned with the inner life of the learner, relationship with God, and the space for ethics (2.G.1, 53). While this is termed

‘character’, it encompasses matters of will and volition and might be evident as ‘faithfulness’. Examples of this kind of learning include strengthening good habits and spiritual disciplines, deepening relationship with God, and taking care of self. These issues of self-care speak to a person’s resilience, not merely in hardening oneself but also of recognising one’s limitations and those weaknesses which remind us of God’s grace and are an important aspect of ministering to others.

The influence of fellow trainees during the course is also important in RL, estimated in this study to contribute around 16% towards trainees’ growth and learning for this sample. Many trainees noted that their training was a key time for maturation and it seems that much of this influence happens informally, just spending quality time with godly people. Although the influence of individual examples is no doubt substantial, the fact that this happens in a learning community is also important. One might say that the culture of the community takes a key role in such formation. The ethical standards of the community, the modes of relationship, the mutual commitments, and loyalty to each other, all serve to reinforce faithfulness to standards of biblical godliness.

In this RL dimension (as for CL), there is a substantial age differential to the growth and learning from other trainees. Younger trainees are rightly learning from older godly examples.

6.A.4 Sub-Question 4—Post-Course Learning

Finally, the fourth research sub-question asked:

“In what ways do intra-cohort relationships continue to provide support and enhance learning in these three dimensions after leaving the specific training?”

This study found relatively little evidence of continued influence in growth and learning from relationships amongst those cohorts of trainees. The relationships resulting from the residential training, though likely quite deep and close during the course, probably decay in the same kinds of ways that most other non-kinship relationships decay when physical separation occurs. These relationships do continue to provide a level of friendly support but there was little evidence that they contribute greatly to ongoing instrumental or reflective learning.

6.B Significance and Implications

This study strongly supports the preference for specialised training of cross-cultural missionaries to be conducted in communal settings, ideally that of a residential community.¹⁰⁷ Trainees might not benefit greatly from the residential community setting when learning instrumental knowledge and skills. However, developments in relational and formational areas of life are often considered to be a priority in this kind of training and this study finds that relationships with fellow trainees in such settings are a substantial positive influence to growth and learning in these areas.

For IL, interactions and relationships with fellow-trainees were not typically found to have a substantial influence. Good teaching staff were shown to be important influences in this area and there is likely a benefit to personal contact, at least from the ability to ask clarifying questions. Where the material is of particular interest or applicability to the individual and staff are not perceived to be ‘subject matter experts’, many participants might well acquire the material adequately, or even more thoroughly, through personal research or online study. Although not specifically studied here, a plausible implication is that residential communal settings are not as essential for general instrumental learning.

However, for both CL and RL the interactions and relationships with fellow-trainees were found to contribute substantially to reported growth and learning. In these areas, CL and RL, a range of ages within the cohort was found to be beneficial, particularly for younger trainees. There are very few educational settings where training cohorts span a range of up to 40 years. (Accompanying children would extend that further for most of the time aside from formal classes). Younger trainees will likely benefit in substantial ways from the presence of older and wiser fellow trainees, both in explicit relational wisdom and in the observation of godly example.

¹⁰⁷ The findings from qualitative responses showed that respondents were clearly in favour of residential training as opposed to other non-residential options including part-time and online. It is possible that online courses could be constructed with increased communal aspects but it is hard to conceive how they might recreate the kinds of difficult daily interactions which were reported by respondents to be important in knocking off the rough edges. A comparative study with a similar online training program, such as the 13-week ‘Explore’ course of All Nations, would be needed to confirm that the difference in these areas is significant and important.

These findings on the benefits of age diversity should guide those considering the composition of training cohorts.

Potentially the benefits of age-diverse training could be applied in a much broader set of contexts. Given the tendency towards age-stratification within many Western churches, where services and even small groups tend to cater for narrow age bands, this intergenerational mixing is increasingly rare and almost certainly undervalued.

The relatively shallow level of post-course contact between former cohort members suggests that effective communities of learners are unlikely to form without the addition of some kind of external encouragement and resourcing. The clear preference shown was for such groups to be based around type of work rather than based upon training cohorts.¹⁰⁸

One important clarification is that in this model the three dimensions might be distinguished but they are not entirely separable. It is likely that in each area of training all three dimensions are present but in different ratios.¹⁰⁹ For example, in the original Areas of Growth and Learning set (AGL) the question on ‘Bible and Theology’ was found to correlate in each of the dimensions. Whilst this meant that this question wasn’t able to provide useful information to distinguish the dimensions, it was found relevant to all three dimensions, as would be expected in this kind of training.

¹⁰⁸ Further work might be done to structure these communities of practice with attention to the four elements suggested by David McMillan and David Chavis in a ‘sense of community’, namely: membership, influence, integration and fulfilment of needs, and shared emotional connection (McMillan and Chavis 1986). These elements were implicit in the learning community questions used in the survey with respect to their time at SAH 4.B.5, 103).

¹⁰⁹ For those with a background in mathematics or the physical sciences, these relationships might be conceived respectively as vector cross-products or the properties of electromagnetic wave propagation through different media such that the relationships between electric and magnetic fields vary as does the relative speed of light—the phenomenon which produces the appearance of a rod partly immersed in water appearing to bend at the surface.

6.C Limitations and Further Research

A number of limitations and areas for further research are noted in this study. The SAH course is intended primarily for those who go on to serve long-term with the organisation and the only trainees surveyed were those who had both been through the lengthy and rigorous selection process, had completed the training and then joined as long-term missionaries after their training. As noted above (1.E, 8) three distinct groups of trainees were excluded by the study criteria. The largest excluded group were those from NZCMS (about 10% of all trainees) or independent trainees including those from other organisations (about 5%). It is possible that the attitudes of such trainees might be somewhat different from those surveyed but anecdotally it seems that they are more likely to maintain contact with others who complete the course irrespective of organisation than those who do not proceed.

The second excluded group were those accepted to go with CMS-Australia but entering as short-term workers (nominally committed to periods of 3 months to 2 years), usually with a shortened selection process, and largely self-supporting. Typically those expecting to serve for more than one year are asked to complete at least the first half of the course and some complete the full course. This sub-group is relatively small (approximately 22 adults within the reference years of 1975-2018) and more widely diverse in age, experience, and intended ministry.

The third excluded group were those who pulled out during the course, were not accepted for long-term missionary service, or who resigned without serving on location (also approximately 22 adults in the reference years). It is probable that their experience of the course would be more negative than the average. The reasons for 'not proceeding' are most often private and often associated with deep emotions which might only be partly related to their experience at SAH but which, nonetheless, might be difficult to separate from that experience.

It is expected that in each of these three groups there would be a lesser likelihood of friendship bonds forming across the boundaries of organisation, perceived life commitment, and 'graduation'. From incidental conversations it seems that members of cohorts are least likely to stay connected with the people who do not proceed.

Two areas for further study may be: firstly, examining how ‘proceeding’ or ‘not proceeding’ into missionary work affects friendship decay; and secondly, the ways in which different kinds of diversity interact with the formation of relationships. There is quantitative evidence in this study that geographic origin plays into tension and conflict and friendship formation. Some of these effects seem due to variations in the ethos of each branch and are likely to be greater when relationships cross organisational and national boundaries.

Only one institution, SAH, was involved in the present study and comparisons with other missionary training courses, institutions, or theological college courses need to be made carefully. There are likely to be large areas of overlap but such comparisons have been outside the scope of this study.

Participants in this study were almost all drawn from an evangelical Christian sub-culture within Australia, and aspects of the findings may not be transferable to other settings. The three dimensional model of growth and learning is likely to be broadly applicable but it would be helpful to research how socio-cultural settings might alter expectations. For example, the expected roles of training staff and trainees are likely to vary significantly with a country’s predominant power distance norms (Minkov 2013, 212 for example).

Whilst questions were asked in the present study about participants’ attitudes to undertaking the course online, no detailed comparison has been done with online courses. Other institutions are known to have invested more into online instruction and have addressed questions about the formation of communities in such groups (Wiseman 2015). So there is scope for further study, especially in the context of training in the post-COVID era.

This study relied upon self-reported perceptions of growth and learning. The SAH course is not externally accredited and very little is formally assessed so no pre-developed alternatives were available.

No attempt has been made in the present study to explore what many might consider to be some of the indirect purposes of training, namely, enhancing effectiveness;

promoting resilience; and increasing longevity.¹¹⁰ Measurement of these outcomes presents significant challenges that were beyond the scope of this study. Further research could investigate these beneficially.

Although the number of participants in the present study (n=125) was reasonably large for qualitative research, this was a relatively small sample for some of the quantitative methods used. As a result the three dimensional model of growth is advanced tentatively. Although considered feasible and useful for the purposes of this study, the researcher is aware that the model would benefit from confirmation in other settings with larger populations as well as refinements to the survey methodology.

This study has raised a number of questions about the role of tension and conflict in such settings. The kind of course that SAH offers might be an appropriate setting for further explorations since it is one where there is focused attention and skilled mentoring. Several further lines of enquiry are suggested by these results. First, determining where there might be an optimal level of tension and conflict that promotes learning without harmful consequences for either the individual or their ongoing relationships. Second, whether it is educationally helpful to have tension and conflict in some areas but not in others. Preliminary analysis of the areas of tension and conflict suggested clusters around three kinds of issues: ideas, personality and behaviours, and authority. In this area one might also explore correlations with the three different types of diversity (Separation, Variety, and Disparity), and note the different kinds of conflict that result from each (Harrison and Klein 2007, 1203 see Table 1). Deeper analysis of the data sets might answer some of these questions, and that could be a fruitful area for future study.

The imbalances of personality profile types within the organisation raise questions as to their origin and consequences. Further study might reveal the extent to which such distributions are due to self-selection, organisational selection, organisational culture, or just random chance. Other areas of interest might be determining how

¹¹⁰ Similarly, the independent measurement of spiritual formation or maturity in Christ, either at a personal or community level, has not been a focus of this study.

widely such distributions are reflected in the organisation in terms of staff and governance and what impact this might have on policy, for example in areas of risk tolerance, security, and entrepreneurial approaches to deployment.

There is an obvious gender imbalance in the total number of adult missionary trainees (noted at 3.C.1, 85) with an average over the reference population of about 20% single females. A brief examination of the statistical records of CMS-Australia supports the general observation of gender imbalance though the proportion of single female missionaries since before 1900 appears to have dropped fairly linearly from the order of 60% in 1895 to about 15% as of 2017. Recent articles have called for more research in this area (Pew Research Center 2016; Zurlo, Johnson, and Crossing 2019). CMS-Australia, as one of only a few organisations with more than a century of heritage, could make an important contribution to such a study.

6.D Observations and Recommendations for the Organisation

This section presents several observations and recommendations of particular interest to the organisation flowing more directly from this study. (It is anticipated that a separate summary report will be provided to the organisation which will combine insights from this study with the researcher's organisational role).

It is clear from both qualitative and quantitative data that the course is well-regarded by almost all those who participated, even by those whose overall course experience was reported as more negative. The demographic analysis suggests this is a good representation of the underlying population of trainees. There were very few significant demographic splits in the various ratings which implies that the course is catering well to the diversity of trainees over age, gender, family status, and branch of origin. The relatively high participation rate of those invited also suggests this good reputation.

There is clear endorsement of most aspects of the program.¹¹¹ Importantly the qualitative responses to various alternative course modes was overwhelmingly in favour of the residential community and provides firm validation of the main issue in this study, that is, the important role of fellow trainees in growth and learning.

The positive evaluations of the course, location, and residential mode of training combine with the less positive rating of facilities to suggest there is broad implicit support for the current rebuilding program.

Recommendation 1: That the organisation consider how best to facilitate ongoing growth and learning, particularly through resourcing appropriate communities of practice grouped around the type of work in which they are engaged. Responses

¹¹¹ It is acknowledged that this study only explicitly surveyed those who had completed the program and did not compare with those who had studied in other ways. A comparative study would help to confirm these insights. However, a subsequent analysis of general comments about the course found eight respondents specifically addressed such comparisons. All favourably compared the SAH course to the preparation received in other mission organisations, either from the perspective of going with more than one organisation, from experience interacting with others, or as a personnel manager on location receiving others.

from this study indicate that a relatively small percentage of respondents are actively engaged in ongoing development. Similarly, few are engaged in an active community of practitioners in their field who might support such ongoing development, yet there is some interest and available expertise to coordinate such an initiative in a pilot.

Recommendation 2: That the organisation establish a basic system for collecting and categorising reasons for all resignations according to the categories established in previous ReMap studies (Hay et al. 2006). At present no attempt is made to categorise such causes of ‘missionary attrition’ universally, so avoidable and unavoidable departures cannot be separated for analysis. Whilst the organisation’s longstanding reluctance to measure effectiveness is perhaps justifiable from a theological standpoint,¹¹² categorising attrition and measuring longevity in various ways could usefully highlight areas for improvement in training and/or pastoral care.

6.E Suggestions for Missionary Training

This section presents several observations and suggestions which may be helpful to those training missionaries in other settings.¹¹³

The first suggestion is to consider the three dimensional model at the heart of this study. This model could be discussed by missionary trainers to see how well it fits with their own conceptions and experience of training. If found to be cogent, then it seems reasonable that the model be presented to trainees as a framework for them to better understand what areas of maturity are being addressed and so they can engage in levels of self-reflection.

¹¹² In 1797, as the Eclectic Society looked towards the founding of CMS-UK which occurred in 1799, John Venn proposed three principles with the first being “Follow God’s leading, and look for success only from the Spirit” (Stock 1899, 63). Other philosophical questions might also bear on the measurability of effectiveness but the aim of this recommendation is to build upon the point that training has been found to be effective in preparing people for service and further improvements might be made.

¹¹³ This section has been added upon the encouragement of an examiner.

A second suggestion is that missionary trainers engage in reflection processes which aim to make the hidden curriculum more explicit, not just to themselves but to their trainees.

A third suggestion is that missionary trainers consider various ways that relationships between fellow trainees might have influence on growth and learning in the CL and RL dimensions, noting the potential for both positive and negative influence. The aim of this reflection being to then shape or facilitate such interactions within a learning community.

A fourth suggestion might be to further individualise IL learning. An observation from this study is that fellow trainees did not seem to be considered important influences in the IL dimension. One response might be to consider this a deficit and to design learning tasks which enhance collaboration in this area. This might be valid, but when considered overall, it might be better to focus the time during which trainees are together on those areas of learning where these interactions are shown to be more necessary, namely CL and RL. Important IL training might be engaged by flipping the classroom, greater use of online courses, or generally allowing trainees to have personal learning goals and projects. The analysis of the timetable at SAH showed that time spent on CL and RL aspects of the course were substantial (Appendix 4.A.3, 306).

A fifth suggestion is to consider the implementation of personal mentors for each trainee during the period of training. These mentoring relationships would be encouraged to develop a focus on RL aspects of learning, including personality and spiritual formation, but also with reflection on CL, for example reflecting upon tension and conflict with other trainees.

A sixth suggestion is to consider the importance of intergenerational training, particularly given the benefits observed in this study that younger trainees appear to learn from older trainees. A corollary of this would be to resist natural pressure to allow age groups to train in separate cohorts or to flock together within training cohorts.

Finally, a seventh suggestion relates to situations where residential training is not a viable option.¹¹⁴ This study has outlined three dimensions that need to be considered in missionary training. It has also suggested that two of these, CL and RL, benefit importantly from communal interaction, ideally in the same residential community setting. Where this cannot be coordinated with the IL training, which might need to happen online, it is suggested that trainers and agencies consider whether they can integrate aspects of the training into the trainees community. It might be possible for trainees to journal aspects of their daily interactions with family members and discuss with an assigned mentor online, though this solution would present other challenges such as privacy and verification.

6.F Final Thoughts

This study has considered the training of those preparing for cross-cultural missionary work. It has developed a model which identifies three general areas of growth and learning. Most obviously, trainees benefit from orientation in various fields of objective knowledge and skills which will help them to understand the location to which they are proceeding, its culture, and its society. However, there is also a long history of missionary training which points to the importance of relational skills and the ability to work with other people. Finally, those who leave home, friends, and extended family to work amongst other nations and cultures need to have a resilience that combines appropriate self-care and fortitude with an obedient and submissive dependence upon God. These areas are most naturally developed in residential community settings.

Missionaries are sometimes treated differently by those who stay at home. Yet the qualities that are expected of missionaries, for which such training has been found so

¹¹⁴ In view here are considerations like prohibitive costs or impossible visa options for trainees or trainers, or even the dynamics of world events like the COVID-19 pandemic, rather than just inconveniences or reluctance to engage in the necessary relationships and openness of residential community life.

helpful, are the qualities expected of every minister and of every Christian. So we might well ask, how could our church communities be changed so that all members are complete in Christ? Paul often gives thanks for the triad of graces—faith, love, and hope—in the congregations to whom he wrote as he encourages them toward maturity:

“We give thanks to God, father of our Lord Jesus Christ, always praying about you, hearing of your faith in Christ Jesus, and the love which you have for all the saints, through the hope stored up for you in the heavens . . .

“. . . [Christ] whom we ourselves proclaim, admonishing every person and teaching every person in every wisdom, so that we might present every person complete in Christ.” (Colossians 1:3-5a, 28, researcher’s translation)

*Living in community is not a requirement of ordination;
it is a requirement of theological education.¹¹⁵*

¹¹⁵ The Most Rev Dr Glenn Davies, personal communication, 1995.

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APPENDICES

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Appendix 1 For Introduction (none)

None.

Appendix 2 For Literature Review (none)

None.

Appendix 3 For Methodology

Appendix 3.A Methods - Research Design

Appendix 3.A.1 AGST-Alliance—Ethics Application

AGST Alliance

Ethical Clearance for Research with Human Participants

Research Working Title: The importance of intra-cohort relationships for multi-dimensional development of participants in a residential course training cross-cultural workers: A mixed methods investigation.

Ethical clearance needs to be approved if you propose to use living human participants in your research, and/or research data which are not accessible in the public domain. Use this template to complete the form. Ensure your answers are concise but clear. Ethical clearance must be obtained before you commence data-collection.

Main research question

“How are intra-cohort relationships formed in an agency-based residential training course for cross-cultural workers important to the multi-dimensional development of participants during the course and in the field?”

Participants: identity

Description of participants:

(e.g. age group/ age range, inclusion/exclusion criteria, where from, etc.)

- ☐ Those who have completed the course of cross-cultural studies at St Andrews Hall in preparation for serving as Long-term missionaries with CMS-Australia.
- ☐ A focus on those in cohorts who have completed the course during the years 2008-2017 with current Development and Training Secretary.
- ☐ Adults from mid-20s to mid-60s
- ☐ Although not a criteria for inclusion in this study, almost all participants will have at least the equivalent of 1 year of theological or biblical studies (as this is a pre-selection criteria for the organization) and would usually be tertiary educated.
- ☐ The majority of those who qualify for the final survey would have completed at least 2 years of missionary service on location.
- ☐ Most will be of Anglo-Australian origin.

- ☐ Many would come from an evangelical Anglican background but there are others from other reformed evangelical traditions.
- ☐ A majority (roughly 60-70%) of active missionaries come from the NSW branch of CMS-Australia.
- ☐ About 85% are married couples.
- ☐ There are about 30 single women and 1 single man. (Out of 64 cohorts only 4 have had more men than women and 4 have had equal numbers).

Number of participants :

- ☐ Focus groups (2-3) of about 5 participants each (total of approx. 10-15)
- ☐ Individual interviews (may not be necessary but possibly about 5)
- ☐ Supplementary interviews with staff of St Andrew's Hall (3-5).
- ☐ Survey to be sent to most current CMS-A missionaries (up to 200 adults including both members of couples aiming to obtain 60-100 responses).
- ☐ In some circumstances it might be inappropriate to send the survey if, for example, there would be an unacceptable security risk.
- ☐ Not all would have been to SAH in the main time period of interest (last 10 years) but these can be identified and excluded in analysis if necessary.

Time needed by participants for their involvement:

- ☐ Focus Group and Individual interviews are expected to take nominally 1 hour
- ☐ Survey questionnaires will be aimed to take 30-45 minutes each.

Participants: risk and consent

- ☐ How will consent for participation be obtained?
(e.g. voluntary response to a survey, consent forms, guardian's permission)
- ☐ Participation will be voluntary.
- ☐ In the focus groups and interviews, all participants will be asked to sign a form and also requested to confirm consent on the recording.
- ☐ For the survey, informed consent will be included in the survey instrument submission.
- ☐ It is likely that topics concerning children will be raised as part of this study, it is not the focus of this study. Children are often included in the activities at SAH as part of the community but will not be directly interviewed as part of this study.

What information will you give /what assent will you request from participants who are unable to give informed consent?
(e.g. from young children).

- ☐ Those who cannot give informed consent in some form (either written or verbal) will be excluded from the study in so far as interviews or surveys. However, as with any research investigating networks and groups of cohorts, people who are not surveyed might be named by other participants.
- ☐ What unusual risks/vulnerability are likely to be present for the participants?
(e.g. recall of past experiences, challenges to faith, commenting on significant adults, etc.)
- ☐ It is known that some participants have not enjoyed their time at St Andrews Hall and there have been relationship difficulties.
- ☐ I am aware of one historical case of abuse at the institution. This person is no longer part of the organisation and there is no other participant from that cohort expected to be a part of the focus group stage which is likely to be the most sensitive way to question in this area. I doubt that the other participant from that cohort knew of the abuse at the time.
- ☐ Another cohort included a couple whose marriage broke up and there are several participants from that time still around. One couple from that cohort might be interviewed and I suggest that I'll ask them privately if they wish to participate in the focus group or separate interview.
- ☐ More generally there is a potential that information divulged by a participant in a focus group might be misused by another participant.

What procedure will be put in place to deal with these risks/vulnerability?
(E.g. independent person present, debriefing planned, etc.)

- ☐ Focus groups would be in the context of a conference. Whilst the risk is expected to be low, there would be several other senior pastoral staff of the organization, both men and women, available to debrief anyone if any problems arose.
- ☐ For focus groups I will make it clear that information to be divulged should not be used inappropriately and ask that participants respect such confidential matters. (This is a common expectation at these conferences).
- ☐ Individual interviews, would be conducted in a semi-public location (i.e. private but observable), and with other senior pastoral staff available to debrief if the need arose.
- ☐ Survey questionnaires would likely be done online and remote. I will discuss the questionnaire with the appropriate pastoral supervisor before sending the link so they are aware of possible sensitivities arising. I will discuss with my academic supervisor the idea of providing an extra question asking if they feel the need for debriefing or advice of what to do if the questionnaire raises concerns for a participant.

What expense reimbursements/inducements do you intend to offer to participants?

- ☐ No monetary inducement is planned. I will offer to reimburse expenses or offer to buy a coffee/tea for individual interviews.

- ☐ No monetary inducement is planned for survey participation. This will be reviewed with my supervisor. A token amount might be offered, such as a voucher on Amazon.

What period will you allow for participants to change their mind about involvement and/or their data being used?

- ☐ Participants of focus groups, due to the nature of such groups, will be able to withdraw physically from the group once the interview has started, but will not be able to withdraw their contributions. If focus group participants request to withdraw particular comments within 1 week of the focus group I will attempt to edit such comments during the transcription and coding process to address the concern.
- ☐ Participants of interviews may request to withdraw within one week of the date of interview and their data will not be used in the analysis.
- ☐ Survey participants will be given the opportunity to go through the survey and confirm participation at the end at the time of submission.

Will information on your research findings be made available to participants? If so, when/how?

- ☐ I expect to produce an internal summary of the research and findings for the information of staff and missionaries of CMS-A. This would likely be part of the writing process after the survey has been analysed. This would probably be announced internally and I could supply the summary directly to those who request it.
- ☐ Individual responses will not be identified unless specific permission is given to attribute them. This may be done at the time of interview but will also be confirmed in subsequent correspondence.

Researcher wellbeing and reputation

What safeguards will be in place during the research process to ensure your well-being and/or reputation?

- ☐ Aside from the rigours of post-graduate study, and the time and effort taken to conduct, transcribe and code responses, there are unlikely to be any particular physical risks involved in this study.
- ☐ The potential for vicarious trauma due to stories in interviews is a minor risk but in such a case I would consult with others inside the organization with pastoral and/or psychological expertise, first for the participant and second on behalf of myself.
- ☐ Risk to reputation might come from perceived mishandling of confidential or private information. This does not constitute significant additional risk as my work already has this as a factor. Written approval will be sought from the institutional head of CMS-A, who is direct line manager for both SAH and myself.

What safeguards will be in place during the research process to ensure the reputation of your institution(s)/AGST Alliance?

- ☐ All data collected directly from participants will be kept confidential. Comments will be anonymised where possible, especially in anything destined for wider distribution.
- ☐ To protect CMS-Australia and in particular St Andrew's Hall, the summary report will be presented to senior staff and any concerns discussed ahead of any wider distribution.
- ☐ AGST-Alliance's reputation risk at this point appears to be mostly connected with ensuring that the research is conducted to accepted academic standards. I am confident my academic supervisor will be adequate for this task.

Data collection

Proposed research methods:

(e.g. questionnaires, interviews, observation, archives research, journaling, survey, etc.)

- ☐ The primary data collected from participants will be via focus group and individual interview, and electronic survey questionnaires. The interviews will be recorded and transcribed. Survey questionnaires will be collated electronically.
- ☐ In addition further research is being conducted amongst the archives of the organization, collecting lists of cohorts for the organization's records which can then be used to reconcile other data.

How do you propose to recruit and/or select participants?

(E.g. by advert in church newsletters, personal contacts, denominational lists, etc.)

- ☐ For the focus groups I plan to ask for volunteers from those attending a biannual missionaries conference to be held at the end of June-2017.
- ☐ If I do not obtain adequate numbers there or for some reason the representation needs to be supplemented, I will approach other missionaries currently on home assignment to create alternate focus groups or individual interviews.
- ☐ The survey questionnaire would be advised through internal channels of CMS-A.

How/where/by whom will data be collected from the participants?

- ☐ Data will be collected by myself, either in person, or via online questionnaires.

Who needs to be informed about your research data collection?

(e.g. church leaders, guardians, teachers, etc)

- ☐ My direct line manager is the institutional head of CMS and SAH and is aware of my research and I will seek explicit permission to conduct focus

groups, interviews, and survey questionnaires at appropriate stages in the research.

- ☐ My colleagues are also aware of my general topic area and will be informed in more detail at appropriate stages in the research.

Data analysis & reporting

How do you propose to analyse the data?

- ☐ I have done a number of interviews in previous work, including transcription.
- ☐ I will be doing qualitative analysis of the focus group and interview transcripts using RQDA to code topic areas for survey questionnaire preparation.
- ☐ I anticipate using a mixed set of questions for the final survey questionnaire and plan to use appropriate methods for analysis, whether quantitative or qualitative.

To what extent will data be kept secure and/or confidential and/or anonymised?

- ☐ I will keep all audio recordings and raw coded transcripts in encrypted personal memory devices (with backups).
- ☐ Transcripts which have been 'de-identified', (by the separation of names from the data), will also be treated confidentially and will be kept secure too however quotes may be used internally in the writing up of research and in summary reports in appropriate ways.
- ☐ All transcripts will be assessed for potentially damaging references and any concerns discussed with my academic supervisor.
- ☐ Raw material (audio recordings and transcripts) will be kept securely for purposes of academic audit and potential archival value but will not be released without appropriate consultation.
- ☐ Raw data will be kept until 12 months after the dissertation process is completed and no longer than 5 years after the interviews unless specific further permission is granted from all relevant participants to retain them longer for an agreed purpose.

How will you ensure security of data and/or confidentiality and/or anonymisation?

- ☐ See above point.

Other ethical issues:

(indicate other possible ethical issues raised by your research proposal – and how you propose to address them e.g. use of photos, recordings, etc)

- ☐ Whilst there is a danger of inappropriate use of information divulged in focus groups, my experience with a pilot amongst my peers suggests that the experience of talking through these kinds of topics also has potential for good.
- ☐ There is a possibility that information divulged in an interview or even in a questionnaire might implicate someone in some negative act. Such matters might require me to step out of the researcher's shoes and act to inform appropriate authorities.

Research documents

Attach copies of all forms/documents relating to the collection of your data (e.g. survey, interview question template, participant information and consent forms, invitation letters, adverts, etc)

See also following appendices.

Chris J.A. Cooper

Name/signature (student):

Date: 15-Jun-2017

Dr Allan G. Harkness

Name/signature (supervisor):

Date: 17 /06 /2017

[When completed email/send to your program director]

Office Use	
Assessment:	Program Director
Assessor:	Approval:
Date:	[Original Signed]
	Date: 06/18/2017

Appendix 3.A.2 **Letter Requesting CMS Permission**

28-Jun-2017

Rev Peter Rodgers

Federal Secretary

CMS-Australia

Level 5/51 Druitt Street,
SYDNEY NSW 2000

Dear Rev Peter Rodgers:

Re: Permission to conduct research regarding St Andrew's Hall cohorts

As you know I have been engaged for some years in post-graduate studies in the general field of Christian Education with the Asia Graduate School of Theology - Alliance based in Malaysia and throughout South East Asia. I began these Ed.D. studies well before I contemplated moving to CMS. The move has resulted in a changed focus for my proposed research project about which I am quite content. I am hoping to examine the CMS-A training institution, St Andrew's Hall and in particular the importance of intra-cohort relationships in the development of CMS missionaries. The working title I have chosen is:

"The importance of intra-cohort relationships for development of participants in a residential course training cross-cultural workers: A mixed methods investigation of instrumental, communicative and reflective learning."

My research proposal has now been submitted to the Education Committee of AGST-Alliance. They have approved it and, with a few alterations, given me Ethical clearance to proceed. One of the expectations is to get formal approval from 'the Institutional Head' of CMS-A and of St Andrew's Hall. I have previously been in contact with David Williams (DTS) who advised that you would be the sole person needed to give approval for my research. I will copy him on this in case you wish to discuss any aspect of this.

I attach copies of the letter of approval from the Education Programs Committee as well as copies of the Research Proposal and Ethical Clearance edited to reflect the changes they requested.

In brief the main research project is divided into two main phases of data-gathering. In the first phase I wish to invite 10-15 missionaries to participate in 2 or 3 focus group interviews at the upcoming Mid-Year Missionary Conference scheduled for this coming weekend. These groups will be voluntary and conducted at times outside of the scheduled program. In these focus groups I will ask questions about their experiences of learning at St Andrew's Hall.

In the second phase I will prepare an online survey and invite a large participation of former graduates of St Andrews Hall to reflect on their experiences of learning in the cohorts. I will request separate permission for this phase of the research.

I see several ways in which the results of this research will be helpful for CMS and the wider mission community. Of course, having not yet done the research, I am in no position to promise any particular results. However it is my suspicion that the fact that St Andrew's Hall training is done in a close residential community is a

crucial part of the training's success. If this is true then this research might indirectly help CMS to promote the importance of this training. Another implication might be seen in intentionally providing for 'communities of practice' to develop amongst former cohort members to enhance their ongoing development.

I now request the following:

Permission to use CMS databases and files for background of St Andrew's Hall cohorts and the selection of participants in the study.

Permission for me to invite CMS missionaries to participate in focus groups and/or individual interviews in line with the attached documents. I hope to conduct 2-3 focus groups at the upcoming Missionaries Conference and request your permission and endorsement for this.

I apologize for the short time remaining for consideration. I accept that it might not be possible to adequately evaluate this in the time available. Still, I do hope you will be able to give quick approval so that I will be able to make use of the opportunity.

Sincerely,

Chris Cooper

Attachments:

Letter: AGST Alliance EdD Dissertation Proposal Approved (15-Jun-2017)

Dissertation Research proposal (Edited version of submission on 10-Jun-2017)

Ethics Clearance & informed consent (Edited version of submission approved 18-Jun-2017)

Approval was given verbally. And signed on this letter.

Appendix 3.A.3 Analysis of Educational Background of Trainees

A database of current and recent missionary records was analysed to collect educational backgrounds, appendix table 3.1 (237). The records in this database are incomplete give a reasonably accurate impression of the spread across areas of study. The educational achievements and areas of study were assigned to various disciplines within the 12 categories used in the current Australian Division of Education (ASCED) (Australian Bureau of Statistics and Trewin 2001).

Appendix Table 3.1. ASCED broad discipline areas

BROAD	DISCIPLINE AREA	Individuals	Qualifications
01	NATURAL AND PHYSICAL SCIENCES	37	41
02	INFORMATION TECHNOLOGY	2	3
03	ENGINEERING AND RELATED TECHNOLOGIES	17	18
04	ARCHITECTURE AND BUILDING	5	8
05	AGRICULTURE, ENVIRONMENTAL AND RELATED STUDIES	3	5
06	HEALTH	44	73
07	EDUCATION	66	84
08	MANAGEMENT AND COMMERCE	29	38
09	SOCIETY AND CULTURE	195	354
	<i>Theology (091703)</i>	<i>186</i>	<i>273</i>
	<i>All Other</i>	<i>69</i>	<i>81</i>
10	CREATIVE ARTS	13	17
11	FOOD, HOSPITALITY AND PERSONAL SERVICES	0	0
12	MIXED FIELD PROGRAMMES	0	0
	TOTAL (~3.2 qualifications / person)	204	641

This taxonomy shows 12 BROAD areas. In this system there are two more detailed levels (NARROW and DETAILED) which are not reproduced here with the exception of Theology (091703).

Almost all trainees have done at least 1 year equivalent of theological study. Some have been excused this in some roles. There were 273 entries for 186 people out of 204 in database of adults current at the time of that analysis, 18 do not appear to have any theological study recorded but it is likely they have done something and records have not been updated. It is also likely that other degrees in progress at the time of application have not been recorded.

Most trainees have at least one undergraduate degree and most have studied in more than one of the above 10 Broad areas in addition to their studies in theology (which fall into area “09” of the taxonomy).

Appendix 3.B Methods - Phase 1 - Interviews

Appendix 3.B.1 Sample Interview Information Pages

This appendix contains two documents used in the focus group interviews: a Participant Information Sheet (kept by the participant), and an Informed Consent Form (one copy kept by the participant and the signed copy kept by the researcher).

Appendix 3.B.1.a Information Sheet—Focus Group

1. Research Title:

The importance of intra-cohort relationships for multi-dimensional development of participants in a residential course training cross-cultural workers: A mixed methods investigation.

2. What is this study about?

This study is about the importance of relationships amongst participants developed during CMS Australia's intercultural training course at St Andrews Hall, Melbourne.

3. Who is carrying out the study?

The study is being conducted by Chris Cooper, currently one of the Mission Personnel Secretaries of CMS-Australia, and will form the basis for the degree of Doctor of Education through AGST Alliance under the supervision of Dr Allan Harkness, Advisory Director of AGST Alliance and International Programmes and Partnerships Manager, LeaDev-Langham NZ.

4. What does the study involve?

The study has been designed with two main phases of data collection. The first kind of data collection will be performed through interviews of focus groups and individuals. Both focus groups and individual interviews will be recorded and then transcribed and analysed for major themes. A web-based survey will then be designed and given to graduates of St Andrews Hall.

5. How much time will the study take?

Each focus group or individual interview is expected to take 60 – 90 minutes.

6. Can I withdraw from the study?

Whether your experience has been good or bad, the information you provide in this study is potentially of benefit to the program and your participation is encouraged. However, participating in this study is entirely voluntary – you are not under any obligation to consent and – if you do consent – you can withdraw until cut-off points as defined below.

For focus group interview: If you take part in a focus group and wish to withdraw, it will not be possible to exclude individual data once the session has commenced so the cut-off point is the start of the interview. The interviewer will attempt to send the transcription to participants for confirmation. If you have a particular objection you may request that identifying data or irrelevant negative references be excluded

from the study however since all members of the focus group will receive the same text it will not be possible to guarantee complete anonymity. The cut-off point for a request to exclude some information will be no shorter than 1 week after being sent a copy of the transcription.

7. Will anyone else know the results?

All aspects of the study, including results, will be strictly confidential and only the researcher and academic supervisor will have access to information on participants except as required by law. A report of the study may be submitted for publication, in which case individual participants will be anonymised in that report. A more detailed report might also be produced for those in CMS-A with responsibility for the ongoing training and development of missionaries. A summary of this report will be sent to those who have participated upon request.

8. What will happen to the data collected?

As noted above, interviews will be recorded. Data and analysis will be kept on the researcher's personal computer and back-up devices with appropriate measures for security. Data stored will include audio files of interviews, text and processed files of transcriptions of interviews.

As noted above the researcher will attempt to distribute transcribed text files to interview participants of focus groups and individual interviews. The researcher will request but can give no guarantee that other participants of focus group transcriptions will not share information more widely.

9. Will the study benefit me? (if so, in what way?)

There are two immediate ways that people might benefit from this study. It is hoped that some future participants in the course at SAH might benefit from this study's findings – and to the extent this study has worthwhile insights published – participants in other similar courses might benefit. The second way, which is more likely to affect you, would be if CMS-A was able to make use of this study in promoting ongoing learning of missionaries.

10. Do I receive any reimbursement for my participation?

No monetary incentive is being offered for participation in this study though if there are particular costs of participating the researcher is willing to reimburse agreed expenses.

11. Can I tell other people about the study?

If you participate in one of the original focus group or individual interviews it would be helpful if you do not reveal either the questions asked or particular responses at least until the study has been completed. However, I would like to encourage as wide a group as possible to participate in the survey so I am happy for you to share that the study is going on, its aims, and potential benefits.

In addition, please be aware that especially during focus group interviews, other participants might reveal things about themselves or others which it would be appropriate to keep confidential to the group. So it is essential that you keep such confidences, whether such revelations are noted from the focus group or from reading a transcript.

12. What if I require further information?

If you would like more information or if you have any questions to be answered before you make your decision about whether to participate, or you have questions about this request, please contact me at [email and phone contact details provided but removed here for privacy]

13. What if I have a complaint or concerns?

If you would like to discuss your participation in this study with someone not directly involved, please contact:

Dr Rosalind Lim-Tan, Director of the AGST Alliance Education Programs:

Email: [email and phone contact details provided but removed here for privacy]

Thank you for reading this information sheet. I believe this research will be helpful to future cohorts of those at St Andrew's Hall and it might also help CMS-A to decide on appropriate forms of ongoing development for missionaries. I do hope you are able to participate.

Your Servant in Christ

Chris J.A. Cooper 30-Jun-2017

Research Title:

Informed Consent

I consent to audio taping of the interview.

I understand that I can withdraw my participation in the focus group at any time if I do not wish to continue. However as it is a focus group discussion it will not be possible to erase my participation in the discussion to that point.

I understand that the information and views I provide will be kept confidential and anonymous: my name and personal details will not be revealed in any of the research writing.

I undertake not to divulge comments made by other participants in the focus group session.

Signature of participant

Name of participant

Signature of Researcher

Date _____

I would like to review a transcript when it is available. ☐

I am interested to receive a summary of the results of the research, when it is available. ☐

Email address:

Tel. no.:

A copy of this informed consent is for you to keep.

RESEARCHER COPY (codes for use by researcher)

FG #	Part #	Inits	Comp	T. Sent.	T.OK .	VALI D	Sum.S.	1	2	3
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Please answer the following Questions without consulting anyone else:

What year (and semester) was your St Andrew's Hall cohort?

_____ - _____

Who were the staff members when you were at St Andrew's Hall?
(leave numbered columns blank till instructed)

Names of STAFF at St Andrew's Hall during time	1	2	3
--	---	---	---

Please name the other members of your cohort? (leave numbered columns blank till instructed)

Names of COHORT (family members together)	1	2	3
---	---	---	---

Appendix 3.B.2 Semi-Structured Interview Questions—Focus Group

Following are the MAIN questions that have been asked in focus groups, with some slight modifications and with some limited guidance.

“Most of the questions will be about your experience at St Andrews Hall. Please feel free to expand your answers to each question in the appropriate location below. However, it is not expected that you will spend more than 30-45 minutes to answer. (the focus group interviews so far have been of the order of 30-60 minutes)”

1. I’m asking questions about SAH. Let me start by asking, was it overall a good time or a bad time? Easy or Hard? Growing or stunting?
2. What was your experience of your fellow cohort members at SAH? Was it important that you were together at SAH?
3. Tell me about what you learnt from others in your cohort? (what kind of things did you learn? inside the classroom or outside?)
4. Can you think of a time when you learnt through the act of teaching or explaining to someone else? Tell me about that time.
5. How did you learn to trust others in the cohort?
6. In your cohort were there natural divisions? (men vs women, single vs married, states, colleges etc)
7. Can you tell me one of the most memorable incidents in your cohort? (Did you develop any rituals or running jokes?)
8. Was the classroom a ‘safe place’? (What made it a safe place? Did it feel like the right place to learn?)
9. Did you grow in self-understanding? What was helpful to self-understanding? DiSC or other assessment tools? What about your spiritual life?
10. Did you have any times when you were unexplainably emotional at SAH and how were others involved in that? Was this associated with any kind of change in your understanding of yourself?
11. How would you compare the SAH training to your previous bible or theological training?
12. If you were redesigning part of the course, what would you most want to change?
13. What would you say to someone who wanted to do this training online?
14. What would you say to someone who wanted to only attend this part-time?
15. Is there anything else you’d like to say?

Appendix 3.B.3 Semi-Structured Interview Questions—Staff**Semi-Structured Interview – Individual STAFF (DRAFT)**

“I will turn on the recorder now and ask you if you have been informed about the purpose of this interview and whether you are happy to be interviewed.

I will also confirm at the end of the interview that all is still ok. If something comes up and you want to withdraw please talk to me at the end.”

[Turn on Recorder and label the interview.]

This is an interview with <...name...> on <...date...> starting at <...time...> in <...location...>. The interviewer is <Chris Cooper>.

Please state your name again for the record and so I can check the levels <...name...>

Have you been informed of the purpose of the interview and are you happy to proceed? <...yes/no ... >

Thankyou.

Question areas:

1. What is the full designation of your role?
2. How long have you been working in Missionary Training at St Andrew’s Hall?
3. In your own words, please describe what you think St Andrew’s Hall is attempting to do.
4. As you prepare people for long-term cross-cultural work, where do you see the most gaps?
5. What ‘theorists’ guide you in constructing the current course?
6. How would you break up the elements of the course at present?
7. Variations amongst cohorts
8. Characterising participants
9. What makes SAH hard for some?
10. To what extent do you think SAH transforms people?
11. What do you do intentionally to bring about this education?
12. How else does this happen?

Appendix 3.B.4 **Focus Group Sampling**

Interviews using focus groups were conducted with a total of 15 former trainees. Historical records of SAH cohorts were used to calculate expected values for demographic statistics over the same years (1975-2018) and confirm appropriate sampling.

Appendix Table 3.2. Summary of Focus Group Demographic Statistics

Area	Observed (n=15)	Expected (N=691)	Test	Result
Gender:			$\chi^2(1, N = 15) = 1 \times 10^{-30},$ $p = 1$	OK
Female	9	8.63		
Male	6	6.37		
Family Status:			$\chi^2(2, N = 15) = 0.98,$ $p = 0.614$	OK
Single	4	3.03		
Couple	2	4.16		
Family (w children)	9	7.81		
Age at SAH:			From inspection – representative.	
Mean	36.1	37.3		OK
Span	24-56			OK
Years Spanned:	1985-2017	1975-2018		
Branches:			$\chi^2(5, N = 15) = 2.52,$ $p = 0.774$	OK
NSW	9	8.99		
VIC	2	2.69		
QLD	1	1.52		
SA	1	0.96		
WA	1	0.56		
TAS	1	0.28		

Appendix 3.C Methods - Phase 2 – Survey

Appendix 3.C.1 Survey Instrument—Scales Considered

The following published survey instrument scales were considered. Some of these are proprietary.

Appendix Table 3.3. List of possible Survey Instruments

Name	Abbrev.	Comment	References
National Student of Survey Engagement	(NSSE)	run in the USA by the Trustees of Indiana University. See nsse.indiana.edu	(ACER 2011; National Survey of Student Engagement (NSSE) 2017; Kuh 2001) ** many other references could be added here).
Australian Council for Educational Research	ACER		See references (Australian Council for Educational Research 2003; Chanock et al. 2004)
Graduate Skills Assessment	GSA		See references (Australian Council for Educational Research 2003; Chanock et al. 2004)
Student Experience Survey	SES	now run by Quality Indicators for Learning and Teaching (QILT) and funded by the Australian Government's Department of Education and Training.	
Course Experience Questionnaire	CEQ	has been the basis of tertiary education surveys in Australia and was probably the most helpful of this set. The Learning Community Scale (LCS) was adapted for use in this survey.	(McInnis et al. 2001; C. D. Smith and Bath 2006)

Name	Abbrev.	Comment	References
Reflective Thinking Scale	RTS	Since an overt aim of the current staff is to create reflective practitioners, this was considered an inappropriate measure.	(Kember et al. 2000; Ghanizadeh and Jahedizadeh 2017; Lucas and Tan 2006)
Growing Disciples Inventory	GDI	a self-assessment tool for Christian Education, specifically in a Seventh Day Adventists school network. This is a comprehensive tool for Christian formation but aimed at primary and early high-school environments.	
Tromsø Social Intelligence Scale	TSIS		(Silvera, Martinussen, and Dahl 2001; Bosuwon 2017; Doğan and Çetin 2009; Bosuwon 2017)
Workplace Social Capital	WSC		(Eguchi et al. 2017)
Erasmus Mundus Intercultural Competence Toolkit	EMIC		(EMIC 2015)
Developmental Model of Intercultural Sensitivity	DMIS		(Bennett 2004; Hammer, Bennett, and Wiseman 2003)
Theological Schools Inventory	TSI		(Hunt and Hunt 1993)

Name	Abbrev.	Comment	References
Relationship Quality scale	RQ	A scale to measure 5 main factors: trust in honesty and thus in the university's credibility; trust in benevolence, that the staff and faculty are concerned about students welfare; satisfaction in the relationship with staff and faculty; affective commitment of the student to the university; and a negative factor of affective conflict in their relationships with staff and faculty	(Snijders et al. 2018)
Social Context And Learning Environments	SCALE	measures both student-student and student-instructor relations. The questions in this set were really measuring very low level relationship factors and would have no discriminatory power in the SAH setting which is far more intimate than the typical undergraduate university lecture (e.g. "I am acquainted with the students sitting near me in class")	(Walker and Baepler 2017)

Name	Abbrev.	Comment	References
Mode of Relationship Questionnaire	MORQ	which derives from the Relational Model Theory of Alan Page Fiske and Nick Haslam. Two main versions of this appear to be around. The theory does not appear to be well-known. Rather than administer the full 40 question set or the shorter version, a very simple 4 question set was included to see if the basic concepts resonated with participants.	(Fiske 1992; Haslam and Fiske 1999; Haslam 2004; Fiske, Schubert, and Seibt 2017).

Appendix 3.C.2 Survey Instrument—Final Version**SAH Research PROJECT**

The following questionnaire is part of a post-graduate research project being conducted with AGST-Alliance. The survey sample is a limited set by invitation only.

Each person has been provided with a personal invitation code in the link for this survey which auto-fills some of the fields in this survey with general demographic information but personal details are kept separately.

Please **ONLY USE YOUR OWN LINK**, spouses have separate links. If you didn't use the link to get to this page then please copy the code separately from the email.

If you attended SAH more than once, you might have received separate emails and different links. Please use the one for the course that you feel was more important for you. (If you really want to submit a second full survey you can also do that with the other link but that would be going above and beyond ...).

Personal Invitation Code * _____

SAH - Research Information Page

This page has information about the research.

If you undertake this survey, please aim to complete it by 28-Feb-2019.

1. What is this study about?

This study is primarily about the importance of relationships amongst participants developed during the intercultural training course at St Andrews Hall, Melbourne.

2. Who is carrying out the study?

The study is being conducted by Chris Cooper, currently on staff in the organisation, and will form the basis for a post-graduate degree through AGST Alliance under the supervision of Dr Allan Harkness, Advisory Director of AGST Alliance.

3. What does the study involve?

This is a web-based survey of graduates of St Andrews Hall (primarily those who remain with the organisation) and is part of a larger mixed- methods research project.

4. How much time will I need for this survey?

This survey is expected to take 45-60 minutes and progress cannot be easily saved partway through (sorry) so it is best to complete within one sitting. If you tend to spend more time thinking and/or provide longer answers to surveys then you might want to set aside a longer period. If you are running out of time, you could give very quick answers, submit the form and then 'edit' the responses using the link provided (see next point).

(Questions with red asterisk are required, usually 'comments' are optional)

5. What if I want to revise my answers?

After you have clicked on the SUBMIT button at the end there is a link you can use to edit your responses. Please copy that link if you think you may want to revise your

answers later. (right-click - copy link then paste it somewhere you can come back to it). If you contact the researcher directly it should be possible to send you this link separately.

Without the 'edit responses' link you may need to re-take the whole survey. If you re-take the survey with the same personal invitation code then the most recent valid answers will be taken.

6. Can I withdraw from the study?

Whether your experience at SAH has been good or bad, the information you provide in this study is potentially of benefit to the program and your participation is encouraged.

However, participating in this study is entirely voluntary – you are not under any obligation to consent and – if you do consent – you can withdraw until the cut-off date (28Feb2019).

For this web-based survey: answers are not submitted until the final 'SUBMIT' screen is completed. After this point, it may still be possible to withdraw as long as the results have not been processed and the submitted results can be clearly identified. The deadline for withdrawal will be on the final screen.

7. Who will know the results?

All aspects of the study, including results, will be confidential and only the researcher and academic supervisor will have access to raw responses provided by participants (except in the unlikely event that they are required by law).

A report of the study may be submitted for publication. A more detailed report might also be produced for those in the organisation with responsibility for the ongoing training and development of cross-cultural workers. The final screen includes an option for you to request a summary of this report too.

In all reports no participants will be identified without permission, and any responses quoted will be anonymised.

8. What will happen to the data collected?

Data and analysis will be kept on the researcher's personal computer with appropriate measures for security and backup. Data stored from this survey phase will include survey responses.

(Note: Where it becomes obvious that there are deficiencies in existing administrative records, these are also being followed up and corrected).

9. Who will this study benefit? (if so, in what way?)

There are two immediate ways that people might benefit from this study.

First, it is hoped that some future participants in the course at SAH might benefit from this study's findings – and to the extent this study has worthwhile insights published – participants in other similar courses might benefit.

Second, more likely to affect most participants, would be if the organisation was able to make use of this study in promoting ongoing learning of workers.

A third indirect benefit of this study is connected with the current plans for rebuilding SAH. Whilst this study is not directly connected and was begun independently, insights from this study may be relevant and could be used in promotion of the facility.

10. Do I receive any reimbursement for my participation?

No monetary incentive is being offered for participation in this study.

If there are particular costs of participating please consult directly with the researcher.

11. Can I tell other people about the study?

I, the researcher, am individually inviting those currently or recently with the organisation (resignation since 1-Jan-2014) to participate so I am happy for you to encourage others to complete this survey too. You could share that the study is going on, its aims, and potential benefits to others but please don't share your responses with those who haven't yet responded themselves.

12. What if I require further information?

If you would like more information or if you have any questions to be answered before you make your decision about whether to participate, or you have questions about this request, please contact me at [email and phone contact details provided but removed here for privacy]

13. What if I have a complaint or concerns?

If you would like to discuss your participation in this study with someone not directly involved, please contact: Dr Rosalind Lim-Tan, Director of the AGST Alliance Education Programs: [email and phone contact details provided but removed here for privacy]

14. What if during this survey I recall something that needs some further action?

It is possible that questions asked in this survey might uncover something painful for you or serious enough to be investigated. This survey is NOT the place to disclose any such serious matter.

If there is something for which you think you might need some more specialist help and you don't currently have access to such a resource, you could discuss this with your RMD.

If there is a serious matter which might need to be investigated, please use the organisation's independent complaints person available through: *[email address provided]*

(This contact information is also on the organisation's website by clicking 'complaints' at the bottom of the home page).

15. Final word

Thank you for reading this information page. I believe this research will be helpful to future cohorts of those at St Andrew's Hall and it might also help the organisation to decide on appropriate forms of ongoing development for workers. I do hope you are able to participate.

Consent to participate in the research is implied when you SUBMIT the form on the screen FINAL SURVEY SUBMISSION but you can withdraw up till the cutoff date by emailing me separately.

When you are ready to proceed, please choose YES below to continue with the full Survey.

If you don't have the time right now but intend to come back, select LATER and SUBMIT on the following page (Not Completing) - this will at least let me know you plan to come back and I might be able to send a reminder.

If you don't want to participate at all then please answer NO and SUBMIT on the following page (Not Completing). It would be helpful if you explain why, but that is

up to you.

Proceed *

- ☐ YES
- ☐ LATER
- ☐ NO
- ☐ I want to EDIT a previously submitted form.

Basic ID info

Due to the nature of the research, your responses needs to be tied back to you but will be kept confidential and anonymised when reported.

The following information should be already included if you used the link but please correct it if there has been an error : Year and Semester, Gender, Initials.

Year of attendance at SAH * _____

Semester (1=Jan-Jun, 2=Jul-Nov) :

- ☐ 1
- ☐ 2
- ☐ Other : _____

Gender:

- ☐ Female
- ☐ Male

Initials: _____

Length of the course

Currently the default length is 5 months or 19 weeks. In the early years the course was almost a full year.

Some trainees have only attended for a shorter period, especially if it is 2nd time through.

Number of weeks completed at SAH? _____

You may add here any short clarifying comments for these questions ... e.g. "only attended weeks 1 to 8", "Missed 3 weeks due to illness", "course in my day was X weeks" ... _____

Your friendships with FELLOW TRAINEES

It will be helpful for this survey for you to recall all FELLOW TRAINEES in your cohort at SAH. You do NOT need to name anyone in this questionnaire but it might be helpful if you jot down a quick list for yourself as you consider following questions. (Don't forget to include yourself, and your spouse if applicable).

Total adults in your course at SAH (please edit if you think this number is incorrect or empty) *

How many of these adults can you remember from your cohort, (including yourself/spouse)? *

Close Friends (NOT including yourself or spouse)

In the following three questions please use your judgement about who you would say was (at least) a 'close friend'. You might consider the following dimensions: shared life and perspectives; mutual help; acceptance; level of confidence and trust; conflict.

How many of your Fellow Trainees would you say were your 'close friends' - BEFORE SAH? *

How many of your Fellow Trainees would you say were your 'close friends' - BY THE END OF SAH? *

How many of your Fellow Trainees would you say were your 'close friends' - NOW?* _____

Overall Course Experience

Thinking about your time at SAH overall. Please indicate how much you agree with each of the following statements:

My time at SAH was ... *	Agree Strongly	Agree	Neutral	Disagree	Disagree Strongly
Enjoyable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encouraging	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relevant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Time well spent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Money well spent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Good Preparation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	TRAINING & PREPARATION				ASSESSMENT & SELECTION
	1	2	3	4	5
How was the balance between ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	A FIXED CURRICULUM				INDIVIDUAL TRAINEE NEEDS
	1	2	3	4	5
How was the balance between ...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What was something HELPFUL that needed to stay? *

What was something UN-HELPFUL that needed to change? *

	Very Negatively	0	1	2	3	4	5	6	7	8	9	Very Positively
How would you rate the PROGRAM at SAH? (the courses, activities etc. during your time) *	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How would you rate the STAFF generally at SAH? (During your time at SAH) *												
How would you rate the LOCATION of SAH? *												
How would you rate the FACILITIES at SAH? (Accommodation, classrooms, etc.) *												
How would you rate SAH as a training institution overall? (during your time at SAH) *												

Any comment on the length of the SAH course? (Currently 19 weeks/5 months)

The courses at SAH aim to develop people in a number of areas. These 3 sets of questions ask you to:

- ☐ indicate the areas in which you felt you learnt or grew the most;
- ☐ identify the most important influences.
- ☐ comment on the learning value to you of those influences

Set 1A -Please indicate how much you agree. "SAH was helpful for my learning/growth in ... " *

[illegible]

Set 1B - For each of the following rows (same as above), please select the most important influences (up to 3 columns) ... *

[illegible]

Set 2A -Please indicate how much you agree. "SAH was helpful for my learning/growth in ... " *

	Agree Strongly	Agree	Agree somewhat	Neutral	Disagree somewhat	Disagree	Disagree Strongly
developing skills in conflict resolution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
preparing to learn language	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
managing family transitions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
understanding how I relate to others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
understanding myself and personality preferences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
strengthening good habits & spiritual disciplines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
deepening my relationship with God	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
taking care of myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Set 2B - For each of the following rows (same as above), please select the most important influences (up to 3 columns) ... *

	Teaching Staff	Mentor	Fellow Trainees	People outside the SAH	Personal research (studv/books)	Self-Reflection	N/A
preparing to learn language	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
managing family transitions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
understanding how I relate to others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
understanding myself and personality preferences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
strengthening good habits & spiritual disciplines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
deepening my relationship with God	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
taking care of myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What would you say about the learning value of ...

Interactions with TEACHING STAFF generally?

Interactions with your assigned MENTOR?

Interactions with FELLOW TRAINEES?

Interactions with people outside the SAH community? (e.g. cross-cultural friends)

PERSONAL RESEARCH?

What was the general topic area of your major writing project at SAH?

Times of SELF-REFLECTION?

SAH Evaluation

This section presents various elements of SAH life and asks you to assess how helpful you found them. The following 3 sets of questions are based on an evaluation you may have completed during SAH.

(Co is used instead of the organisation name)

Set 1/3 - For each row, please indicate how HELPFUL that element of SAH life was for your learning / growth ...(If you don't recognize the item choose N/A) *

	Very HELPFUL.					Very UN- HELPFUL	N/A (Can't remember)
	1	2	3	4	5	6	N/A
Preparation for SAH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
InCulture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
InMission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Living Faiths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Basic Medical	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IT security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Security and risk management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TCK and Educational planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
UN Basic Security (online)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research Project/Essay	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other assignments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Co. Deputation and communications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Co. Guidelines and Finance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Co. History	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Co. Vision	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How did your interactions with FELLOW TRAINEES help you learn in the areas above? (1/3)

Set 2/3 - For each row, please indicate how HELPFUL that element of SAH life was for your learning / growth ... (If you don't recognize the item choose N/A) *

	Very HELPFUL.					Very UN- HELPFUL	N/A (Can't remember)
	1	2	3	4	5	6	N/A
Orientation Week - (General)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orientation - Sharing Stories	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bible Storytelling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cross-cultural conflict	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marriage/Singleness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enrichment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Learning Groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mentoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LOTE gatherings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multicultural teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TCK training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MILL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Resolving Everyday Conflict	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sharpen Your Interpersonal Skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community Duties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community Meals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How did your interactions with FELLOW TRAINEES help you learn in the areas above? (2/3)

Set 3/3 - For each row, please indicate how HELPFUL that element of SAH life was for your learning / growth ... (If you don't recognize the item choose N/A) *

	1 Very HELPFUL.	2	3	4	5	6 Very UN- HELPFUL	N/A (Can't remember)
	1	2	3	4	5	6	N/A
Building resilient spiritual lives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Culture shock and transitions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RAFT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transition Fun Day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DiSC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Managing Stress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pastoral Care Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How did your interactions with FELLOW TRAINEES help you learn in the areas above? (3/3)

	Really DIFFICULT					EASY
	1	2	3	4	5	6
Please indicate how DIFFICULT you found it to Live in Community *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Community at SAH

Thinking about the SAH course, please indicate how much you agree with the following statements:

	Agree Strongly				Disagree Strongly
	1	2	3	4	5
I felt part of a group of staff and trainees committed to learning. *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I was able to explore academic interests with staff and other trainees. *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I learned to explore ideas confidently with other people. *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ideas and suggestions from trainees were used during the program. *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I felt I belonged to the SAH community. *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I felt that both Staff and Trainees made themselves vulnerable. *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I felt that both Staff and Trainees could be trusted to keep things confidential. *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I felt that Trainees helped each other. *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I felt close to other Trainees *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I felt that SAH was a safe place to engage in learning and growth. *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I felt that SAH was a comfortable place and we could joke around with each other without causing offence. *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

□ □ □ □ □

[illegible][illegible]

To what extent would you have thought of these relationships as PRICED, where you might have kept records of debts, or based exchanges on 'rational' calculation of payoffs? *

□ □ □ □ □ □ □ □ □ □

One aspect of living in community is the likely presence of tension and conflict.

[illegible][illegible]

[illegible]

	Very unhelpful					Very helpful
	0	1	2	3	4	5
In retrospect, how helpful was your experience of tension and conflict at SAH in preparing you for life since? *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Any other comments you want to make about tension and conflict at SAH?

Understanding yourself and others

The next few questions ask about various ways of understanding yourself and others with models of conflict management and of personal preferences. Some are taught at SAH.

Conflict Management Styles

A course now taught at SAH deals with conflict management styles based upon work by Thomas and Kilmann (cf TKI). The theory suggests that people tend to have a preference in management of interpersonal conflict along two axes of concern - issue and relationship. As a basic categorisation, people find their preference to be one of 5 basic conflict management styles which are sometimes given a key word and/or an animal (like those below).

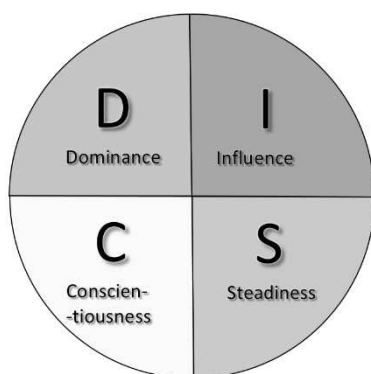
Which of the following styles do you think most accurately portrayed your conflict management style at SAH?



- ☐ Competing (Bull) - High Issue, Low Relationship
- ☐ Collaborating (Owl) - High Issue, High Relationship
- ☐ Compromise (Fox) - Med Issue, Med Relationship
- ☐ Avoiding (Tortoise) - Low Issue, Low Relationship
- ☐ Accommodating (Bear) - Low Issue, High Relationship
- ☐ Don't Remember/Not taught.

Patterns of Behaviour (DISC)

A course now taught at SAH helps trainees understand 'patterns of behaviour' using the 4-Quadrant DISC (Dominance; Influence; Steadiness; and Conscientiousness). If you attended SAH in the last 10 years you probably completed a DiSC evaluation but you might have done one of these questionnaires, formally or informally at some other time.



What DiSC style was identified AT SAH, (as many letters in order as you remember).

You might have done some other kind of personality profile such as Myers-Briggs (MBTI) or Enneagram or OCEAN/Big5. If you recall the results and are willing to share for research purposes, please add.

	No Use – I never think about myself or others in these terms.						Very Useful – I often think about myself or others using one of these models.
	0	1	2	3	4	5	
How useful have you found such personality profiles to understand yourself and others? *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

**Any other comments you want to make about this or other 'personality profiles' you
might have done at SAH (or since)?**

Post SAH connection

Earlier you were asked how many of the fellow trainees in your cohort you'd call 'close friends' now. Please answer the next 2 questions for these close friends.

In the 'comments' you could suggest how often you might be in contact with any from your cohort that you didn't identify as 'close friends'.

Generally how often do you make contact with the 'close friends' from your SAH cohort to share about the following? (aside from your spouse or others in your close location) *

	Weekly	Monthly	Quarterly	Yearly	3-Yearly	Less Often
Family news	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
'Work' news	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Useful resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Personal accountability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Friendship/Mutual support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

How do you contact the 'close friends' from your SAH cohort? (Select all that apply) *

	Weekly	Monthly	Quarterly	Yearly	3-Yearly	Less Often
Meet face to face	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Video/Audio call	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Text Chat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social Media	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Email	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Read newsletter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Any other comments on your contact with other SAH cohort members?

Communities of Practice

One way to continue learning is to gather with others working in the same field. When such a group meets to discuss ongoing development and skills this might be called a 'community of practice'.

Are you a member of an ongoing group which meets in some way with a purpose of discussing ongoing development of knowledge and skills? (a 'community of practice') *

- ☐ I have not been in such a group.
- ☐ I was in such a group for a while but not now
- ☐ I am currently in such a group
- ☐ I am currently in more than one such group
- ☐ Other:

If you are or were in such a group. How do or did you meet?	Weekly	Monthly	Quarterly	Yearly	3-Yearly	Less Often
Face-to-Face	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electronic video/audio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Text Chat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Email	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What would you say about the learning value of this group?

	Disagree Strongly				Agree Strongly
	1	2	3	4	5
Do you think that your organisation should set up such communities of practice? *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If your organisation were to facilitate various communities of practice, please indicate your level of interest.

- ☐ No interest in such a group
- ☐ I would like to hear more about this idea
- ☐ I would consider joining a group
- ☐ I am interested and ready to participate in such a group
- ☐ I am interested and ready to coordinate or lead such a group

If such groups were facilitated, would you prefer them to be based on: *

- ☐ SAH cohorts
- ☐ Location
- ☐ Type of work
- ☐ Other: _____

Any comments on the topic of Communities of Practice?

Preparation options

Things have been changing in education generally. Many people are now opting for part-time study. Opportunities to learn online have expanded greatly in recent years. Some courses at SAH now make use of online material. In this environment, it is worth asking if it is still necessary to retain SAH as a full-time residential learning environment.

	None of it!										All is essential
	0	1	2	3	4	5	6	7	8	9	10
How much of the SAH course should be completed? *	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What would you say to someone who wanted to avoid going to SAH? *

What would you say to someone who wanted to study at SAH but only PART-TIME? *

What would you say to someone who wanted to study at SAH but stay OFF-SITE? *

What would you say to someone who wanted to study the SAH material but only ONLINE? *

Family life

Families live in close proximity at SAH with many implications. There are just a few questions that will be different in the next section.

Were you married or single when you were at SAH? *

- ☐ Single
- ☐ Married

Single

Do you have any comments about your experiences of single life at SAH?

Do you have any comments about your experiences of children at SAH?

Do you have any comments about your experiences of children at SAH?

Any advice you'd give to couples/families coming to SAH?

Married

How many children did you have WITH YOU by the time you left SAH? (including any born during the course)

If you had children at SAH, what ages were your children when you 'graduated'?

Any comments about the experience of being at SAH with children (yours or others)?

Any advice you'd like to pass on to those considering coming to SAH with children?

Any advice you'd give to couples/families coming to SAH?

Any advice you'd give to singles coming to SAH?

Prior Experiences

These questions ask about general background.

How many years of 'COMMUNAL LIVING' had you experienced before SAH? (i.e. houses shared with non-family members, residential colleges, geographically close community with interactions on an almost daily basis) *

How many years of TERTIARY education have you completed? (Full Time years or equivalent) *

How many years of THEOLOGICAL or BIBLE college training have you completed? *

How many years were you in paid employment before SAH? *

How many years were you employed in a 'ministry' position before SAH? *

FINAL SURVEY SUBMISSION

Thank you for completing this survey. This survey is intended to investigate educational aspects of the SAH experience. Some of the feedback may be passed on to improve the way this happens at SAH.

I will try to treat your answers according to your wishes. I have several questions below to help me get that right. If you wish to withdraw from this survey you may do so until 28Feb2019 as long as you contact me directly and I can identify which responses are yours (please quote the personal invitation code you used).

Reminder about serious issues

As noted in the 'Research Information Page', this survey is not intended to deal with serious matters of abuse etc. If something in this questionnaire has raised an issue for you about your time at SAH and you believe formal action may be appropriate then please contact the independent professional engaged by the organisation to handle complaints. [email and phone contact details provided but removed here for privacy]

Implied consent

Your submission of this form will be taken as consent to be included in the study including:

- * Quote responses where this can be done without obviously identifying you.
- * Compare above responses with previous numerical feedback evaluations you gave about the various courses during SAH (if they exist)

(OPTIONAL) I also give additional consent for the researcher to ...

- ☐ quote my responses even if this might identify me.
- ☐ consult my DiSC profile kept at SAH (if there is one)
- ☐ access my narrative self-evaluations from SAH (if still available)

Roughly how long did you spend on this survey?

- ☐ Less than 15 minutes
- ☐ 15 - 30 minutes
- ☐ 30 - 60 minutes
- ☐ 60 - 120 minutes
- ☐ More than 120 minutes (2 hours)

Would you like to receive a copy of a summary report at the end of this research project? (Please also confirm email address below)

- ☐ Yes
- ☐ No

Would you like to receive a summary copy of your own responses? (Please also confirm email address)

- ☐ Yes
- ☐ No

Email address for report (if different to invitation link)

Any final comments?

Not completing?

You've selected an entry to cancel participating at this time. Please come back later to complete the survey.

If you wish to give a reason for not continuing, please indicate it below. (You can use the original link to come back and complete the survey at another time).

(OPTIONAL) If you can, please give a reason for not completing the survey at this time.

Do you want a reminder to try again?

- ☐ Yes
- ☐ No

Re-send EDIT link

If you have already submitted a complete (or partially complete) response to this survey and want to revise your answers, you can use the 'Edit responses' link you saw after submitting the form. If you need this to be re-sent, please indicate below. It might need to be done manually so could take a couple of days.

Any further instructions for this?

Do you want the EDIT link resent?

- ☐ Please Re-send Edit Link.
- ☐ Go Back
- ☐
- ☐
- ☐
- ☐ END OF SURVEY INSTRUEMENT
- ☐

Appendix 3.C.3 Sample Email Inviting Survey Participation

Dear NAME,

I am asking for your help in a research project on the training at St Andrews Hall (SAH) as part of my academic studies. You might have seen a mention in February [internal newsletter]. This is an online survey using Google Forms and I expect it to take about 45-60 minutes in one sitting, and it will be easier on a full-sized computer rather than a phone.

This is academic research on the relational type of education at SAH and is not directly linked to the plans for rebuilding. I believe that most former trainees have found SAH a positive experience and they have been willing to respond to requests for endorsements. However, I also know that others may not have had such a positive experience and might be tempted to remain quiet. In which case let me give an extra encouragement to take this opportunity to share with a greater degree of anonymity and for the purposes of honest research and the potential improvement of the courses.

I have chosen not to use potentially sensitive words or the name of the organization in case that would cause a problem for anyone. Your full names are only included in this email so that you can confirm you are using the correct link. Names of individuals or organisations are not used or requested within the survey (aside from myself and academic contact information). However, I still need to connect responses with individuals so I have assigned a unique Personal Invitation Code (PIC) for each individual and for each attendance at SAH. Thus if you attended more than once you may get two emails and you should choose which course was more important for you and use that link. I might also have sent this email to an incorrect or shared email address. So please check that you are using the right link.

There is further information once you get to the 2nd page of the survey and you can choose whether to continue, do it later, or decide not to complete it. If you decide not to complete the survey it would be helpful if you could give a reason but that is entirely up to you.

(If this is not you, please forward this email or reply to me and let me know that I have made a mistake either by replying to this email or sending to *[researcher's email address]*).

Name:	Name
Year:	Year
Semester:	Semester
Personal Invitation Code (PIC):	Code
Hyperlink to go directly to the survey:	Click HERE!

(You can check the text in the link by hovering with your cursor).

Sent to: [email address]

Once again, I request your help in this study.

Appendix 3.C.4 Initial Note in Organisational Email

(February 2019)

Researching St Andrews Hall

You may be aware that RMD Chris C is engaged in further academic study which includes a research project focusing on St Andrews Hall. This is independent research through an academic institution, AGST Alliance. It is not directly connected with the current rebuilding campaign, but insights gained might lead to course improvements and some further attention to ongoing professional development. Your participation is optional, but whether your experience was good or bad, it would be good to have your feedback.

Chris has prepared a survey open for all current workers (and those who have resigned since 1 January 2014). Invitations are being prepared and each individual (separate for husband and wife) will get a unique code and link in an email. Individual responses will be confidential but overall conclusions will be reported both internally and for academic purposes. You should receive an individual invitation to participate shortly and the target date for completion is 28 February. If you don't receive an invitation by mid-February and wish to participate, please email Chris directly.

Appendix 3.C.5 Reminder Note in Organisational Email

(March 2019)

Thanks for responding to research survey on SAH

Chris C **says:** Last month we mentioned a research survey (my personal research project; not an office project) about the training at SAH. Many thanks to those who have already responded. A quick reminder to those who wanted to respond but haven't yet, please dig out the invitation sent to you by separate email and respond in the next few days. If you didn't receive an invitation or can't find it, please email me (Chris C) directly.

Appendix 3.D Methods - Phase 3 – Survey Analysis

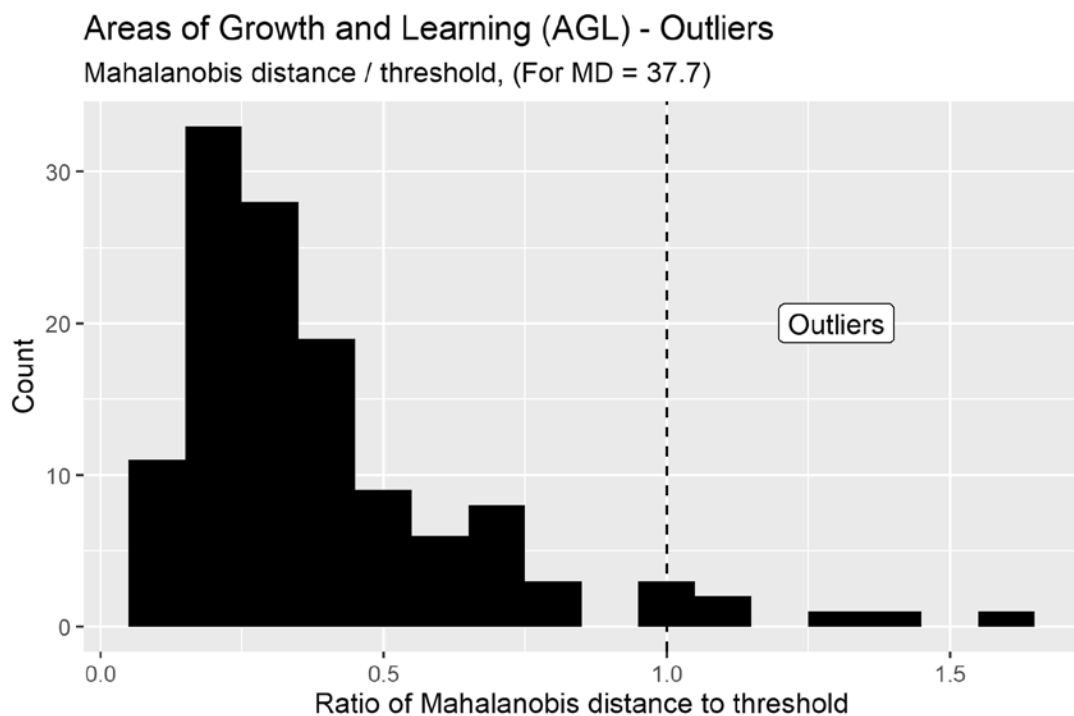
These appendices relate to the Methods used in Phase 3 which contains the technical analysis.

Appendix 3.D.1 Data Preparation

Appendix 3.D.1.a Outliers

Outliers can represent contaminated data, for example where the respondent does not answer the question seriously but gives either random responses or consistently overly negative or positive responses. These can be identified using a calculation of the Mahalanobis distance then examined individually (Zijlstra, van der Ark, and Sijtsma 2011). Multivariate outliers were identified by Mahalanobis distance with a standard threshold value set by the X^2 distribution at $\alpha=0.001$.

Seven outliers were identified in the AGL dataset (see histogram appendix figure 3.1, 278). Individual examination of these outliers, including accompanying comments, suggested that they reflected real but unusual experiences. These three cases were removed from the model development process (Phase 3, Task 1) and the accompanying analysis of Influences (Phase 3, Task 2) with minor changes to outcomes. Several runs of the CFA in Task 1 were completed removing 0, 1, 2, 3 and 7 outliers with slight variations in the fit of the preferred model. Overall it was decided not to remove these outliers. Similar outlier calculations were done for other question sets but as the analysis did not proceed for those sets they are not presented here.



Appendix Figure 3.1. AGL identification of Outliers by Mahalanobis distance

Appendix 3.D.1.b Question Set Items

One question item in the AGL data set was repeated in error. The second occurrence was deleted for analysis.¹¹⁶

Appendix 3.D.1.c Normality Checks and Robust Methods

No scale or individual variable was found to pass tests for normality (Mardia tests for multivariate normality, Shapiro-Wilks test for univariate normality) and most variables were negatively skewed. However for most question items the non-normality was not considered to be extreme with most variables meeting the implied guidelines of $|skewness| < 2$ and $|kurtosis| < 7$ (Leung and Kember 2013; West, Finch, and Curran 1995; Kim 2013).

Methods robust to non-normality were used wherever available. When calculating correlation coefficients, Spearman's ρ was used instead of Pearson's r . Instead of the standard Student-t test for group means, the Mann-Whitney U test was used, and in factor analysis the standard Maximum Likelihood (ML) estimator was replaced by the robust version, (MLR), and appropriate versions of the numerous fit statistics were used where available.¹¹⁷ Polychoric correlations were considered but found to be inappropriate to some of the scales and their use would have introduced unnecessary complexity when attempting to cross-correlate with other scales.

Appendix 3.D.1.d Internal Reliability and Item Elimination

Initial scales were constructed for most of the main question item sets by adding up the ordinal values of all items in the set to obtain a total 'score'. The exception being the two Modes of Relationship question sets (MORS and MORT) for which the four components should have added to a constant.¹¹⁸

For internal reliability, a number of sources suggest that Cronbach's α is not robust to non-normal data and indeed a preference is developing for substitution by McDonald's omega (Revelle 2019; Cho 2016; Peters 2014; Viladrich, Angulo-Brunet, and Doval 2017; Revelle 2018), particularly hierarchical omega, ω_h , which takes into account hierarchical structures within the data, a topic of interest given the plan to perform factor analysis. Both Cronbach's α and McDonald's ω_h (hierarchical) and ω_t (total) were calculated. On balance, Cronbach's α was

¹¹⁶ This repeated question allowed a very rough test of repeatability. Only one statistically significant difference was noted, that is, those who identified as DiSC-C who tended to answer the two versions of the question more consistently than other types.

¹¹⁷ Although Li prefers the Weighted Least Squares (WLSMV) estimator in general, on balance the MLR appears to be better for small sample sizes and non-normal data as is the case here (Li 2016).

¹¹⁸ In practice, respondents do not appear to have treated the modes as mutually exclusive, but rather as two polar pairs. This is discussed later.

considered sufficient for the purposes of this study and since most scales met the minimum criterion it was not considered strictly necessary to conduct further analysis though bootstrap sampling with replacement and 500 iterations was used on occasion to improve accuracy, (Dogan 2017). A Cronbach Elimination was performed on each scale to identify items that could or should be dropped, however decisions about dropping items were deferred in some cases until evidence of correlations within the set and factor analysis loadings was obtained.

Appendix 3.D.1.e Model Size and Power

With any type of factor analysis (including CFA, EFA, and SEM) there are theoretical and practical limits to the size and complexity of model that can be constructed. It was noted that a sample size of $n=125$, which would be adequate for many statistical tasks and comparable to other factor analysis examples encountered in the literature (Iacobucci 2009), is still relatively small by the standards used in factor analysis (Li 2016, 941 notes $N=200$ for small in SEM generally).¹¹⁹ However, a simulation study showed that the MLR/RML estimator is reasonably good over a range of sample sizes and that in some cases Type 1 errors can increase with increasing sample size (Holgado-Tello, Morata-Ramírez, and Barbero García 2018).

The small sample size does limit the available power of the model. Thus, although useful results can be obtained, they are reported as indicative and with some caution.

¹¹⁹ Kline quotes “Barrett (2007) suggested that reviewers of journal submissions routinely reject for publication any SEM analysis where $N < 200$ *unless the population studied is restricted in size*. This recommendation is not standard practice, but it highlights the fact that analysing small samples in SEM is problematic” (Kline 2011). The population is indeed restricted for this study.

Appendix 3.D.1.f List of R Software Packages used in Quantitative Analysis

Appendix Table 3.4. List of R Software Packages used in Phase 3 analysis

Package Name	Version	Release Date of Installed Version
BaylorEdPsych	0.5	2012-05-08
bookdown	0.16	2019-11-22 23:10:09 UTC
boot	1.3-24	2019-12-20
broom	0.5.3	2019-12-14 17:40:13 UTC
carData	3.0-3	2019-11-16
corrplot	0.84	2017-10-16
dplyr	0.8.3	2019-07-04 15:50:02 UTC
effects	4.1-4	2019-11-14
emmeans	1.4.3.01	2019-11-27
forcats	0.4.0	2019-02-17 14:40:02 UTC
Formula	1.2-3	2018-05-02
ggplot2	3.2.1	2019-08-10 22:30:13 UTC
Hmisc	4.3-0	2019-11-07
kableExtra	1.1.0	2019-03-16 20:10:03 UTC
knitr	1.26	2019-11-12 21:00:02 UTC
lattice	0.20-38	2018-11-01
lavaan	0.6-5	2019-08-28 21:40:05 UTC
lme4	1.1-21	2019-03-05 22:40:10 UTC
lmerTest	3.1-1	2019-12-13 11:20:03 UTC
Matrix	1.2-15	2018-09-15
MVN	5.8	2019-09-27
officer	0.3.6	2019-11-11 16:00:03 UTC
plyr	1.8.5	2019-12-10 11:30:12 UTC
png	0.1-7	2013-12-03 22:25:05
psy	1.1	2012-06-11
psych	1.9.12	2019-12-14
purrr	0.3.3	2019-10-18 12:40:05 UTC
RColorBrewer	1.1-2	2014-12-07

Package Name	Version	Release Date of Installed Version
readr	1.3.1	2018-12-21 09:40:02 UTC
readxl	1.3.1	2019-03-13 16:30:02 UTC
REdaS	0.9.3	2015-11-12
semPlot	1.1.2	2019-08-20 11:30:02 UTC
stringr	1.4.0	2019-02-10 03:40:03 UTC
survival	2.43-3	2018-11-13
tibble	2.1.3	2019-06-06 13:40:03 UTC
tidyr	1.0.0	2019-09-11 23:00:03 UTC
tidyverse	1.3.0	2019-11-21 05:30:02 UTC

The researcher wrote additional unpublished routines to facilitate analysis.

Appendix 3.D.2 **Methods – Phase 3 - Task 1 – Model Development**

Appendix 3.D.2.a Fit Measures for CFA

A set of model fit indices were determined from consideration of relevant statistical literature (Schreiber et al. 2006; Kline 2011; Parry 2017; Hooper, Coughlan, and Mullen 2008). Models were assessed against a set of relevant measures including nine predetermined tests with two practical cut-offs chosen to indicate a ‘Fail’, an adequate ‘Pass’ fit, or a ‘Good’ fit.

Appendix Table 3.5. Fit Parameters Chosen for Analysis

Variable	Type	Pass Fit	Good Fit	Comment
Model+Data				Name of Model and data matrix used in analysis
ntotal				Number of participants
nObs				Number of different correlation observations
npar				Number of parameters estimated.
df.scaled				Remaining degrees of freedom
chisq.scaled				X ² test statistic scaled
pvalue.scaled	>	0.005	0.05	p-value from X ² test >0.05 indicates model is not rejected
chisq_on_df	<=	3	2	X ² /degrees of freedom, sometimes used.
rmsea	<	0.08	0.03	Root Mean Square Error of Approximation
rmsea.robust	<	0.08	0.03	Robust version
rmsea.ci. lower.robust				Lower confidence interval boundary

Variable	Type	Pass Fit	Good Fit	Comment
rmsea.ci. upper.robust	<	0.1	0.08	Upper confidence interval boundary
N_on_q	>=	5	10	Number of Responses / number of parameters estimated
kcft	<=	0.05	0.08	Power for Close Fit Test.
kncft	>=	0.05	0.01	Power for Non-Close Fit Test
kcftn	<=	0.05	0.08	N required for 80% model power in close-fit test
kncftn	>=	0.05	0.01	N required for 80% model power in non-close-fit test
srmr	<	0.08	0.05	Standardized Root Mean Square Residual
cfi.robust	>=	0.9	0.95	Comparative Fit Index
nnfi.robust (=tli)	>=	0.95	0.97	Non-Normed Fit Index = Tucker Lewis Index. Due to small sample size. Can be truncated to 1.
aic				Akaike Information Criterion
bic				Bayesian Information Criterion
nTests				Number of tests used in this analysis for comparison
CFAT				Overall test outcomes (Note: only includes rows where an actual test is conducted).

Appendix 3.D.2.b Initial Model Testing—AGL1

The following is a brief summary of the model development process identifying the model formulations that were attempted.

Four initial models were tested using all 15 question items:

- ☐ A.A1 - the single-factor model with all items
- ☐ A.CRI1 - the 3 factor model with all items allocated across latent factors as above.
- ☐ A.CRIA1 - the nested 3-factor model based upon A.CRI1, and
- ☐ A.HM1 – an alternative 2-factor model.

It was found that the 3 factor versions (A.CRI1 and A.CRIA1) performed best. Being structurally equivalent, their results are mostly identical.

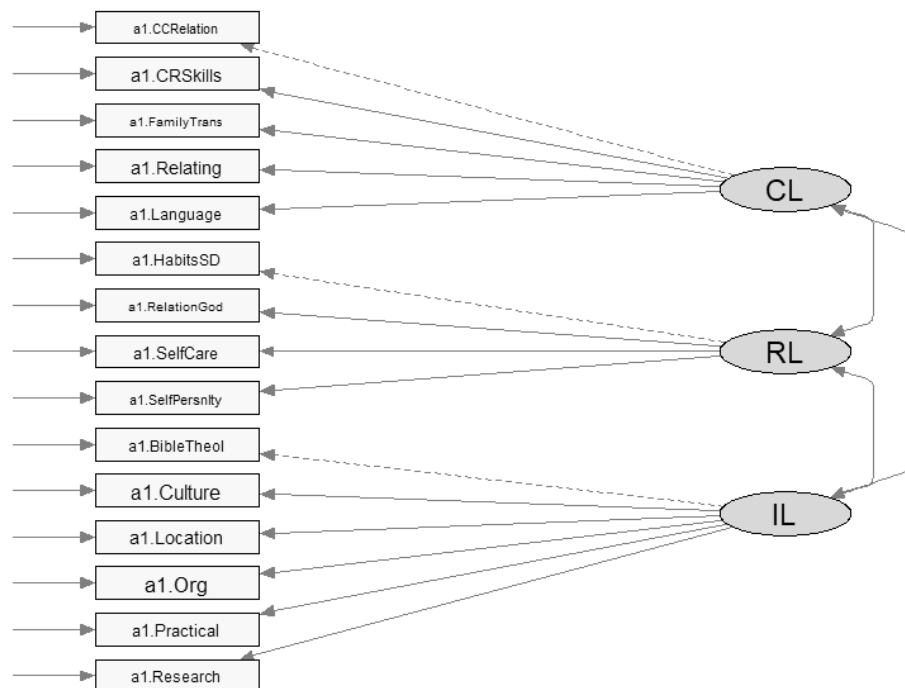
Appendix 3.D.2.c Model Refinement—AGL1

The A.CRI base model was refined in a staged process with constant reference made to the following guides. Refinements were made iteratively within each stage before proceeding to the next stage. Each change involved calculating and considering: measures of fit; strength of item loadings on factors (prefer >0.7 , accept >0.4); variances and co-variances; modification indices (>3.84 being the Chi-squared χ^2 value for 1 degree of freedom); ensuring factors remained ‘identified’ (at least two items per factor and preferably at least 3 items per factor); and, minimising the residuals of the correlation matrix (>0.1). Changes were made when theory confirmed the statistics.

The stages and model labels were as follows:

Stage 1: A.CRI1 - Initial model specification according to theory (see appendix figure 3.2, 286).

SEM Diagram for: Areas of Growth and Learning (AGL1)
Model: A.CRI1 (Pars: none , n= 118 , npar= 33 , df= 87)



Appendix Figure 3.2. Initial model A.CRI1 tested using all 15 question items

Stage 2: A.CRI2 - Consider swapping items between factors (removing the item from one factor and adding it to another, rather than loading on to two factors as might be appropriate in EFA).

In this stage two changes were made.

First, 'Understanding Self and Personality' (SelfPersnlty) was swapped from RL to CL. This recognised the high correlation with 'Relating', a reconsideration of the full question in the context of SAH training curriculum which puts the psychometrics into a context of relationships and the consideration that we often understand ourself with reference to others.

Second, 'Cross-Cultural Relationships' (CCRelation) was swapped from CL to IL. This recognised that, although the aim of teaching in this area is the development of good cross-cultural relationships, as adult learners the self-recognized learning is more likely to be of the theoretical content underlying cultural differences.

Stage 3: A.CRI3 - Remove Low-loaded and/or Cross-loaded items.

In this stage five items were removed.

First – 'Language' (Language) was removed after consideration of the very low correlations with almost anything in the group. This module, Maximum Impact Language Learning, is taught as an intensive and, though regarded as excellent, it can be understood why this might be in a separate category. Part of this is also likely to be due to the dual nature of learning a language—a lot of content and mastery of a skill, even if the aim is eventually communication and meaningful relationships.

Second – ‘Organisation’ (Org) – or understanding more about the culture and practices of the organisation. This was low-loading and with several co-variances. It is understandably a very mixed response depending on background.

Third – ‘Bible and Theology’ (BibleTheol) – understanding more about the Bible and Theology. On the one hand, the loadings show that this is an important aspect of learning and growth and it loaded quite highly, however the integration of this area into all areas of learning meant that it had very high cross-loadings and thus could not be used as a discriminating indicator for any particular dimension.

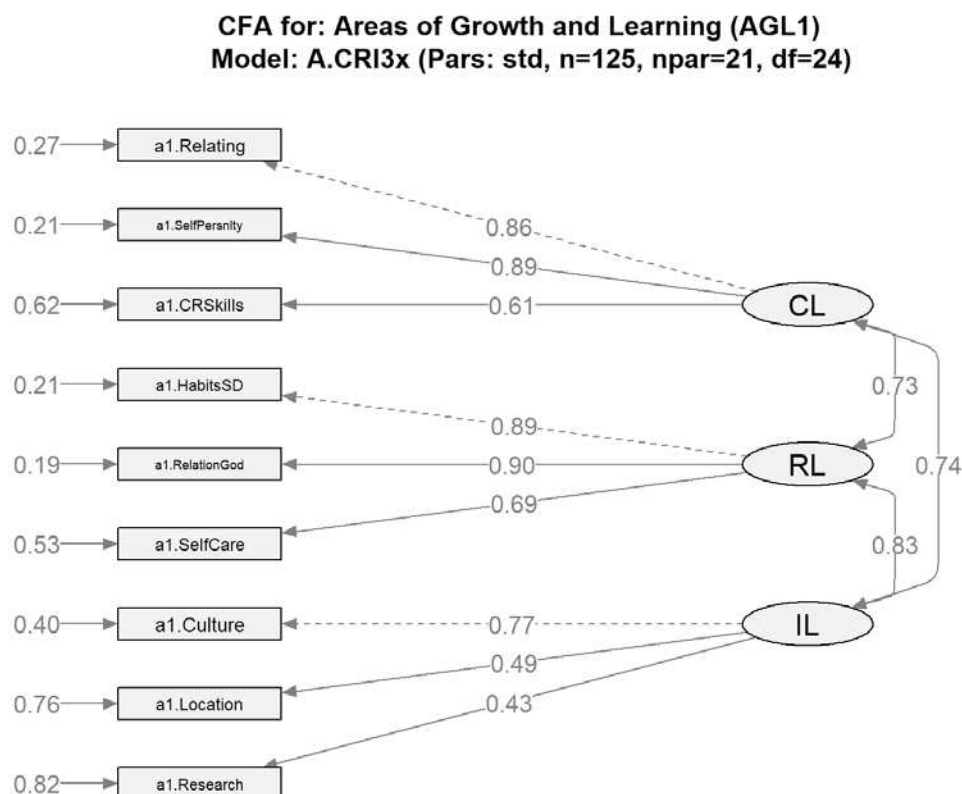
Fourth – ‘Cross-Cultural Relations’ (CCRelation) – although the model had improved by swapping this element, it remained highly cross-loaded and thus was removed.

Fifth – ‘Family Transitions’ (FamilyTrans) – consist of a number of elements and so this element was moderately loaded but with significant cross-loadings and was removed.

Stage 3x: A.CRI3x. A further modification at this stage was added to balance the model within the same methodology.

Sixth – ‘Practical’ (Practical) — cross-loaded with ‘Conflict-Resolution Skills’ (CRSkills) in the CL latent factor. Removed.

This became the PREFERRED MODEL, (see appendix figure 3.3, 287).



Appendix Figure 3.3. Preferred Model A.CRI3x with 9 question items and 3 latent factors

For most practical purposes the model development was terminated at this point. The following stages were explored for academic interest.

Stage 4: A.CRI4 - Add Co-variances between items, first between items loading onto the same factor, then between items loading onto different factors.

One co-variance was added at this stage, between two items on different factors, “CRSkills” and “Practical”. The justification for this was that the ‘Conflict Resolution Skills’ course taught at SAH is a fixed module from a commercial provider and, although dealing with clearly relational content, would be considered ‘Practical’ for most people due to the level of material presented. This covariance was likely due to ambiguity in the question. Whilst some interpreted this conflict resolution material to be very ‘practical’, the intention was to identify things like the 4WD course.

Stage 5: A.CRI5 - Add ALL co-variances suggested by modification indices.

Two further co-variances were added at this point. However, the theoretical justification is not considered to be strong and this was consciously exploring where the mathematics of optimization might take things. This model was not pursued.

Stage 6: A.CRI6 – Continued refinement to a model with a minimum set of 2 items on at least one factor, ‘just identified’.

This stage took the above practice further by removing items and adding co-variances until the bare minimum model might be obtained. It was not pursued and was purely for academic interest. It was noted that, although model fit could be improved according to several of the bank of measures of fit, the statistical ‘power’ of the model suffered substantially and some fit measures also worsened.

A preferred model was then confirmed, aiming to get a reasonable fit and, ideally, without any co-variances as these require extra processing in Task 2 analysis.

The model A.CRI3x was found adequate and subjected to confirming tests.

The preferred model was compared against the following variations:

1. The starting model, A.CRI1
2. The ‘Essentially Tau Equivalent’ version, A.CRI3x.te, which sets all items to be equally loaded onto the same latent factors. (It is noted that the ‘Essentially Tau Equivalent’ model is the basis for the commonly used measure of question set internal reliability, Cronbach’s α . The ‘Tau Equivalent’ version would also set the variances to be equal).
3. The ‘Orthogonal’ version of the same model, A.CRI3x.o, which sets the co-variances between the three latent factors—IL, CL, and RL—to be 0.
4. The single factor ‘Collapsed’ version, A.CRI4C, which removes the 3 latent factors and has all the existing items load onto a single latent factor.
5. The ‘Nested’ version, A.CRI3x.n, which replaces the co-variances between latent factors with a common 2nd-level latent factor. In most respects, this model is mathematically equivalent to the preferred 3-factor model.

Several competing models were also constructed and tested. These included:

1. A 3-factor model arising from the Cronbach Elimination and Omega calculations in the data preparation work. This modelling was essentially

Exploratory Factor Analysis (EFA) as the mathematics drove the model creation and attempts to explain the resulting factor loadings were attempted. The initial model in this series was named, A.PVH1. Some refinement was considered but since the model had arisen from mathematical grounds, choices were limited to refinements suggested in the modification indices.

2. A 2-factor model was also constructed, testing a model that there might be more emotional, 'Heart', learnings and more rationally cognitive, 'Mind', learnings. The initial model was named A.HM1. Some refinement was attempted but this resulted in a model which lost the original theoretical basis and did not improve upon the preferred 3-factor model.

The preferred model, A.CRI3x, was considered overall superior and used for the purposes of Task 2.

Appendix 3.D.3 **Methods – Phase 3 - Task 2 – Analysis of Influences**

The questions in the set of ‘Areas of Growth and Learning – Influences’ (AGL-Inf) are examples of Multiple Response Categorical Variables (MRCV) in which more than one choice can be made to the same question. Whilst these kinds of questions are quite common, the development of statistical methods appropriate for the analysis of such questions has been relatively recent (Bilder and Loughin 2009). There are two main approaches to the analysis of MRCVs. The older marginal model methods are conceptually simpler and can be used when one only has access to summaries of count data. The basic approach is to create a series of 2x2 contingency matrices which are analysed separately then summed to produce a “population-averaged model” (Suesse and Liu 2013, 235).

The newer and more powerful approach is Generalised Linear Mixed Models (GLMM). In this approach model equations are fitted to the data so that the outcome variables are represented by a set of variables identified as either fixed effects or random effects. Fixed effects are those variables that are believed to be related to the outcome variable. Random effects are those variables that are believed to be unrelated to the outcome variable. This class of approach requires the detailed data but it has a great advantage allowing correlations with other variables to be analysed.

Although both methods were explored in this research, ultimately the more powerful GLMM methods were used. These allowed exploration of the impact of other variables, such as Age and Gender, on the way questions had been answered.

Appendix 3.D.3.a AGL-Influences GLMM Model Constructions

A base model (m0) was set up for each influence to examine the effects of the original 15 questions separately as the only fixed effect and with participants considered as a random effect. For ease of identification, each of the nine main question area labels (QnD) was prepended with an abbreviation of the dimension to which it had been assigned in Task 1 (IL, CL, or RL) and the remaining six question marked with ‘0’. The model formula was of the following form (where <Influence> is one of the six influences as above):

$$m0: \langle \text{Influence} \rangle \sim (1|\text{Participant}) + QnD$$

The first main model form (m1) moved the questions to be included as random effects and just added the Dimension of Growth and Learning (DGL) as a single fixed effect.

$$m1: \langle \text{Influence} \rangle \sim (1|\text{Participant}) + (1|QnD) + DGL$$

The second main model form (m2) added two further variables that were noted to be significant: the age of the participant at entry (Age) which was noted to have an interaction effect with DGL (the term $DGL * Age$); and a binary variable indicating whether the participant had been in a recent cohort (Post2008). i.e.

$$m2: \langle \text{Influence} \rangle \sim (1|\text{Participant}) + (1|QnD) + DGL * Age + Post2008$$

The final model form (m3) removed the interaction with Age and instead included other demographic binary variables: Gender of the participant; Marital status; accompanying Children; and whether the household was Perinatal, i.e. “someone

who came to SAH with a child less than 1 year old or had a baby within 6 months of the end of SAH”

$$m3: \langle \text{Influence} \rangle \sim (1|\text{Participant}) + (1|QnD) + DGL + Post2008 \\ + GenderF + Married + Children + Perinatal$$

Appendix 3.D.4 **Methods – Phase 3 – Task 3 – Other Evidence**

Appendix 3.D.4.a Phase 3 – Task 3 – Score Calculations

Scores were constructed for most sets as the simple sum of numeric item responses. For example, for the questions on Tension and Conflict (TAC1), a score for each participant was constructed as:

$$TAC1.sc = \sum_{i=1}^n tac.question_i$$

Exceptions were made for the two Modes of Relationship sets which showed clear indications that two modes in each set were perceived negatively thus the scores were constructed accordingly. For example, the score for the MORS set was calculated as:

$$MORS.sc = (ms.C + ms.M) - (ms.H + ms.P)$$

Appendix Table 3.6. Scores calculated for Task 3

Nominal	Aliases	Description
AGL1.sc	a1.sc	sum of all items from AGL1
IL.sc	a1IL.score	sum of the three Instrumental Learning items from AGL1
CL.sc	a1CL.score	sum of the three Communicative Learning items from AGL1
RL.sc	a1RL.score	sum of the three Reflective Learning items from AGL1
OCE1.sc	o1.sc	sum of all items from OCE1
OCE3.sc	o3.sc	sum of all items from OCE3
LCS.sc	ls.sc	Sum of all items from LCS
LCD.sc	ld.sc	Sum of all items from LCD
MORS.sc	ms.sc	(ms.C + ms.M) – (ms.H + ms.P)
MORT.sc	mt.sc	(mt.C + mt.M) – (mt.H + mt.P)
TAC1.sc	t1.sc	sum of all items from TAC1

Appendix 3.D.4.b Introductory Correlation Matrix Example

Most of the deeper quantitative analysis in Phase 3 is based upon the core principle of correlation. Given that this is a mixed-methods research project in a field traditionally explored through qualitative methods, some readers might appreciate a refresher on concepts of correlations and correlation matrices.

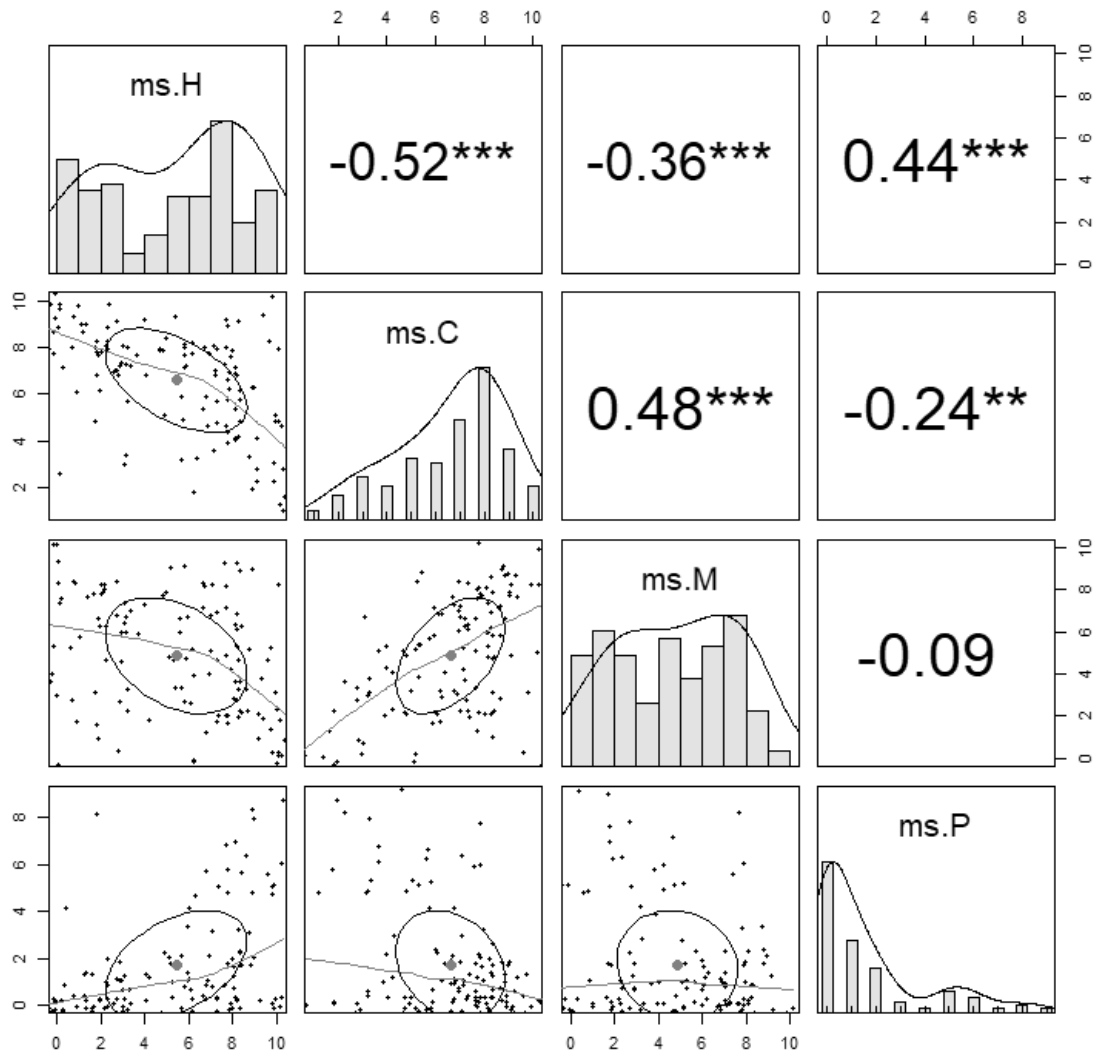
The example below is part of the real analysis from Task 3 but is presented here as a relatively simple set of examples with only four variables to demonstrate the main ideas. The same set of four variables is presented in two different charts.

Respondents were asked to give their perception of the extent to which staff-trainee relationships were characterised as being: 'hierarchical' - indicated by H in the variable name; 'communal' - (C); 'matched' - (M); and 'priced' (P). Responses were given on an 11 step Likert scale ranging with choices of Never, 1 to 9, and Always. The full questions and chart of results for this were given above in section 4.B.6 (120).

The first diagram, appendix figure 3.4 (294), is a condensed format called a 'pairs panel.' It presents the raw data in histogram format for each variable on the diagonals with a smoothed density function overlayed. The lower triangle contains scatter plots for each pair of variables intersecting row and column together with the mean and a LOESS smoothed curve. The upper triangle gives the Spearman Correlation coefficient for the intersecting variables, whether positive or negative, and is marked with the level of significance in the conventional manner (* indicates the correlation is significant at the level of $p < 5\%$, ** for $p < 1\%$, and *** for $p < 0.1\%$).

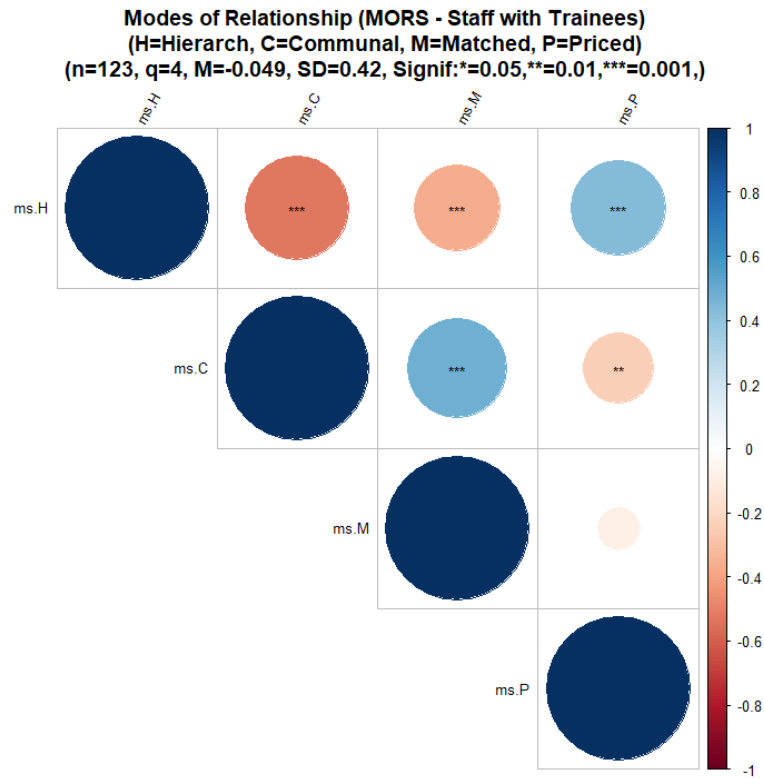
As can be seen, the correlation between the variables ms.H and ms.C is negative, has a magnitude of 0.52 and that is shown to be significant at the level of $p = 0.1\%$. Interpreting this, when trainees perceive that relationships between staff and trainees are more hierarchical, they also tend to perceive them as less communal and vice-versa. On the other hand, considering ms.C and ms.M, the correlation is positive, so when trainees perceive the relationships as communal, they tend to also see them as matched. The correlation between ms.M and ms.P is almost non-existent and it is not significant at the $p = 5\%$ level either.

**Spearman Correlations for: Modes of Relationship (MORS) - Staff and Trainees
(n=123, q=4)**



Appendix Figure 3.4. Pairs Panel plot – Modes of Relationship between Staff and Trainees. Histogram of each variable is shown on the diagonal. Upper triangle shows correlations between the intersecting row and column with magnitude, direction, and level of significance of the correlation. Lower Triangle shows scatter plots of the intersecting variables with the mean and LOESS smoothed curve highlighted.

The next chart, appendix figure 3.5 (295), presents the correlation information more diagrammatically, using size of a circle to indicate the significance of the respective correlation and colour to represent the direction. In this version the significance is also indicated though with larger matrices it is more convenient to blank insignificant correlations or mark them with an 'X'. The diagonals are a reference of +1.



Appendix Figure 3.5. Graphical Correlation matrix - Modes of Relationships, Staff with Trainees.

The other summary data given in the title indicates that there were n=123 cases in this analysis and q=4 questions. For off-diagonal correlations the mean value was M=-0.049 with a standard deviation of SD=0.42.

Correlations between variables are the mathematical foundation upon which the following factor analysis is based.

Appendix 3.D.5 **Methods – Phase 3 – Task 4 – Continued Contact**

Appendix 3.D.5.a Basic Parameters of Close Friendships

Five variables were collected from the data and used to roughly estimate parameters of basic friendships.

- ☐ Total Adults in the course
- ☐ Close Friends at Beginning of the course (FFT_CFB)
- ☐ Close Friends at End of the course (FFT_CFE)
- ☐ Close Friends Now (FFT_CFN)
- ☐ Years Elapsed since the trainee's cohort

From these the following proportions could be calculated for individuals and then averaged over the full time period.

- ☐ What proportion of the total number of adults in the course did the trainee consider to be close friends at the End of the course (FFT_CFEP)
- ☐ What proportion of the total number of adults in the course did the trainee consider to be close friends Now (FFT_CFNPN)
- ☐ What proportion of the Close Friends at the End are still Close Friends Now (FFT_CFNOE)

Plotting a smoothed LOESS curve of FFT_CFNOE against Years Elapsed gives an indication of the pattern of decay.

Appendix 3.D.5.b Decay of Close Friendships—Logarithmic Model

The logarithmic model was fitted to the data taking the logarithm of the elapsed time in years, with parameters β_0 and β_1 :

$$\frac{\text{Close Friends Now}}{\text{Close Friends at End}} = \beta_0 + \beta_1 * \log_{10}(\text{Years Elapsed})$$

Appendix 3.D.5.c Decay of Close Friendships—Power Law Model

A second model using a power law was also prepared, with parameters a and k :

$$\frac{\text{Close Friends Now}}{\text{Close Friends at End}} = a * \text{Years Elapsed}^k$$

Appendix 4 For Results

These appendices primarily relate to Chapter 4, Results.

Appendix 4.A Results - Phase 1 - Interviews

Appendix 4.A.1 Results – Phase 1 – Selected Focus Group Quotes

Appendix Table 4.1 Selected Focus Group Interview responses

STR and modelling	<SAHP> established from the very start of our time together that this was an environment where we could be open and trust each other. The staff modeled this by sharing their stories with us. As we shared, we were respected and listened to.
Safety, modelling, relationships	Yes. The classroom was a safe place because—even when disagreement may have been expressed—all voices (and their personalities) were heard and respected. This was well modelled by the staff, who were generous in listening to comments and questions. In fact, the loving, inquisitive, intentionally relational modelling of the staff was fundamental.
Psychometrics	Yes. DiSC was helpful, time to reflect on habits and goals was helpful, and the privileged opportunity to partake in mentoring was especially helpful. As in other relationships—as husband and wife, as comrades in community, and as students to staff more generally—this relationship proved the necessity of others for the task of revealing one’s self.
Relational emphasis	Although grateful for my previous theological education, SAH stands apart because of its relational emphasis. As <SAHP> says, because cross-cultural Christian work is relational, so must its training be. This relational foundation—peer to peer, student to staff, staff to staff, and student to crossed cultures—enabled a practical, engaging, and enjoyable course to be constructed.
Relationships of staff to students, formal and informal time	To my mind, the tip of the Hall’s iceberg of uniqueness is the close relationship of staff to students expressed in mentoring. Of course, this is enabled by a high ratio of staff to students, but is also in-built into the formal time of the course—and thereby flows out into the informal time.
Tension and conflict	we ... I think we had some differences in ... theological training and theology that brought some conflict amongst us.

Trainee-trainee passing on relationship skills, informal time	we had quite a mature couple, not much older than us, who looked after us closely, and mentored us a lot . . . bore these skills sets ... but um ... definitely differences of personality ... sometimes through direct advice and sometimes simply through their example . . . conflict resolution ... among other things. . . . just [in] conversation . . . just being friendly spending time together, chatting ... occasionally asking questions . . . [among other things] . . . they often acted as mediators. As I say it was in a skill set from where they'd come from.
Conflict, non-residential experience, less conflict and less learning!	no. so it was from the comment I made earlier. We went from living out, commuting to college . . . during theological studies to living in community. It was quite drastically different. to living in ... Even with a half-hour commute we had our own space, we lived our own life. We were somewhat isolated from the other members of the student body but ah ... we certainly didn't have conflicts with them in the same way. And we didn't learn in the same way to live with others. With 'the other'.
Conflict resolution, learning	I learnt grace. Many in the cohort lived in such a way that they showed this grace through their everyday lives. People genuinely sought to put other's needs first. There were personality clashes and there were plenty of opportunities to put into practice the conflict resolution skills we were learning in class.
Psychometrics, safety	well I remember doing the sort of profiling of relationships and the profiling of your own ... so I think there was the DiSC one perhaps and I think there was another one about ... more, relationships with other people [TKI?] and how you might do conflict and that sort of thing so people were able to identify with who they were, as far as a conflict avoider or a this or a that and therefore you learnt from that person because it gave a real life example to um to that and about how they would want to ... you know ... do relationships and so over that time ... you also, you know, appreciated that person for who they are and how to do relationships well with that person in a safe environment because, ... you were ... the idea was it was a safe environment to nut out things. and ... yeah ... you were willing to be a bit vulnerable I think with people.
Psychometrics and conflict!	I remember that everyone on the course was conflict avoiders except for me. So there was no conflict! Because everyone just agreed with me! it was great!

Tension and conflict	because there just wasn't the conflict whereas in . . . they struggled because they had, I think, . . . big families lots of kids, everywhere, and they were all similar ages, bunch of boys and it caused quite a lot of 'conflict' and issues in the group - the parenting styles—some were really strict, some weren't so strict and let . . . kids do different things and that caused quite a bit apparently.
Psychometrics, mentoring, relationships, trainees to trainees, staff to trainees, self-reflection	Yes. DiSC was helpful, time to reflect on habits and goals was helpful, and the privileged opportunity to partake in mentoring was especially helpful. As in other relationships—as husband and wife, as comrades in community, and as students to staff more generally—this relationship proved the necessity of others for the task of revealing one's self.
Scrutiny, conflict, grieving, note participants also pre and post 2008. Section of interview with various speakers intermingled.	<p>“and um ... yeah . that was always there in the background even though you were learning good stuff or even having fun or whatever ... or doing wretched assignments or whatever it was that particular week.”</p> <p><indistinct></p> <p>“some people became really good friends we went in with tension between certain couples. that had previous to ... and there was a tension between different cities when we arrived. I remember one of the first comments that I heard was: "Ah, you people have come from xxx" from someone who came from yyy and that ... conversation came up a few times in the first weeks. um and some tensions grew throughout the time. As certain couples got irritated with other couples. The noise that they made, ... the way they parked the car ... so ... so there was interpersonal tension, very much, aside from the tensions of circumstance and preparing to leave, and having left, and being in limbo, and being under scrutiny.”</p> <p><hmms of agreement from others!></p>
Scrutiny [Qn: did you think of yourselves as under scrutiny?]	<p>“Yes.”</p> <p>“Definitely! That was the hardest part of being there.”</p> <p>“constantly.”</p> <p>“And because I was struggling early on with grieving and I didn't feel like there was any ... kind of ... credence given to that and so ... I, ... and I had... I was pulled up a couple of times about things that I thought was perfectly normal given the circumstances that I was in. And that then heightened the sense of scrutiny. . . . [grieving] the life that you'd established.”</p> <p>“we were told at one stage, we've been watching you.”</p>

<p>Scrutiny ... pre-2008/post-2008</p>	<p>“I wasn't aware of it until towards the end when there were a lot of interviews and things. But I'd been blissfully aware [sic] up until that point and then got quite stressed at the end. . . . [blissfully unaware?] . . . yeah, blissfully unaware. And then we went into a certain period of interviews and things and then that was extremely stressful. And I thought, well I'm glad I didn't know that from the beginning. <laugh>”</p> <p>“I don't think I felt conscious that we were being [assessed] ... I didn't feel a sense of being under scrutiny and people were ... looking at me. I think you kind of knew that the last . . . interview was going to happen at some stage. But I don't think ... I don't think I personally felt that ... they're looking at me, trying to catch me out ...”</p> <p>“I felt part of it was I felt like that they ... there was a sense that this is a really short timeframe to pick up any issues that may be there. So ... I felt like they were picking up things that probably would have just worked themselves out and weren't really big issues but oh maybe that's going to be a problem on the mission field so you need to sort that out now which ... yeah, felt like I was being ... watched all the time.”</p> <p>“its interesting reading, reading its ... yeah the response of the time ... they probably weren't the same people when we were there”</p> <p>[do you think that was valid thing for them to do? or was it the way that they did it?]</p> <p>“I think it was definitely good intention, like well intentioned. I don't think they were trying to be nasty about ... um yeah ... I think it felt a bit heavy-handed.”</p>
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Appendix 4.A.2

Results – Phase 1 – Selected Staff Interview Quotes

Appendix Table 4.2. Selected Staff Interview Responses

Reflective Practitioners	“what we are doing here is providing bible college graduates with specialist missiological training and cross-cultural preparation alongside organizational orientation” “most people have got lots of theology, almost no missiology, and some cross-cultural experience, that would be the norm” “the part that people are least familiar with is anthropology, ethnography, cultural studies . . . from a perspective outside the biblical studies arena”
Reflective learners, tools	"... in 5 months, um ... throw up issues that they're likely to encounter and begin to give them tools to deal with ... but the most crucial part is trying to make them into reflective learners . . . with a focus on transition and cross-cultural movement"
Self-reflection, Issues,	“the self-reflection is crucial so we focus on that for everyone - some are naturally good, some are naturally poor.” “I don't think any of them have thought how to re-read the bible from a perspective outside their own culture. . . . so beginning to open up the possibility of that and what it could [be] like, that's a key one. . . and then ... oh I don't know, the standard heresies that the western church has not so much the importance of comfort, but the spiritual material divide. That's a chronic one. All those kinds of things. . . . [Hiebert's flaw of the] excluded middle stuff” [reading the bible from someone else's eyes] “examples. All right. Throwing up issues that come up in other cultures that we tend to discount as wrong and helping them to re-read the bible. so the main examples I use in class, for example, are around issues of purity and defilement ... which are culturally ... if not universal ... shame and honour is an obvious one. . . . fear, power and blessing, that's a big one ... and patronage and grace . . . so I use them as examples of issues that are going to come up in the majority of cultures in which they'll encounter . . . and then bounce into the bible with that.”

Staff relationships and diversity	<p>“I think the staff-staff relationships are absolutely crucial to setting good staff-student relationships.”</p> <p>“I think because we model as a very diverse staff team who are different to one other and wouldn't naturally get on easily and . . . we bump at different ways in different times and yet we're committed to each other. we love each other, we have fun. We're each other's support structures. The students see that ... they see it in the ways they interact, it comes out in the stories in the first week or so that set this place.”</p>
Relationships, relational epistemology	<p>“[from talking about theorists . . .] an American philosopher called Esther Meek who's given a lot of thought to what she calls 'covenant epistemology' and ... she argues that our best model of knowing is ... interpersonal ... what she calls 'interpersoned relationships'. So having relationships as being the kind of heart of knowing I think is really helpful and actually that fits really well with the epistemology that they teach at [bible college] . . . so this resonates with people, this kind of relational epistemology, and I think that helps us to clarify that the community and the relationships between the trainees and between the trainees and the staff is a critical context for learning.”</p>
Conflict, psychometrics	<p>“the other crucial thing is learning to hang in with people you . . . don't like . . . and we believe very strongly that God puts together every group in a way that's handpicked . . . and therefore if I'm not getting on with so-and-so they're God's gift to me right now so how do I actually grow with that . . . and there's a lot of work on conflict in the course in different ways. I think we tackle it in about 3 or 4 different areas . . . [Resolving Everyday Conflict] . . . There's the DiSC stuff. . . . another one on ... conflict styles generally [TKI] and cross-cultural conflict.”</p>
Tension and conflict	<p>“when we see two people not getting on with one other. We try and ... I usually ... particularly if I'm mentoring but even if I'm not ... um ... try and sit with them and say what can you do with that person? and that also comes up with missionaries ... so go out and find neutral space, do the washing up here or whatever, ... pray for that person, not ...and the more difficult that is the more often you pray for them, every day if necessary. so I think we actively intervene and ask people to try and engage.</p>

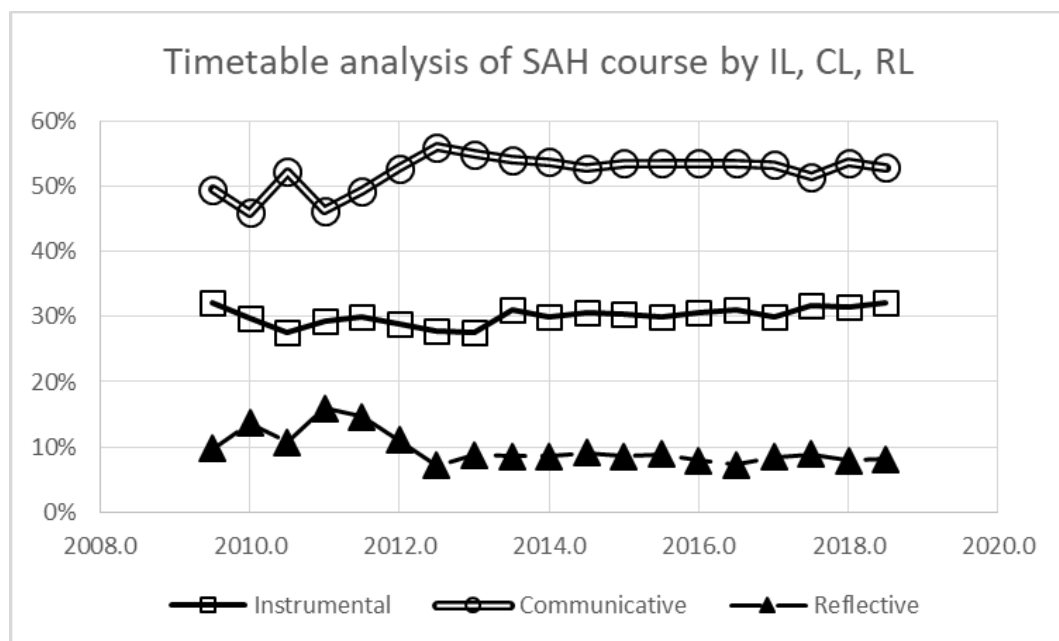
<p>Safe place & initial orientation</p> <p>[How you as an educator and how the staff here as educators create a space that is safe for having that kind of level of sharing?]</p>	<p>“so that's a great question and that's a really big issue because if people don't feel safe then what they'll do is give you what they think is the theologically correct answer. so ... one of the ways we try to create ... to create this as a safe space, well first of all, I think as a staff team we've named that that's what we're trying to do, so we've got that as an intentional ... that's a purpose, that is not an accident. The first week of the semester we spend the whole week in . . . it's kind of an orientation week but what that means is sit in a room and share our stories with each other not just students, but staff as well. Everyone, staff and students and support staff as well. So everyone gets 10 minutes basically to share their kind of testimony, but their testimony more focused on how did God bring me to this point, you know, how did God bring me to be here training for mission with CMS? So we want to hear about how people became Christians, a bit about their family of original stuff and a bit about their journey into mission. And as a staff team, we try to model, we try to model doing that in a vulnerable way. So we will share things that are reasonably personal, like experiences of depression or things going wrong in mission or whatever and ... that sort of sets that sort of vulnerability. This is classic Patrick Lencioni stuff—you build a team by modelling vulnerability. That generates trust that then enables people to work together. So ... and I think that usually that works, doesn't always work. But I think the other thing that's happened over the years is that we've generated a reputation in the wider constituency as a safe place and ... coming to St Andrews is a worthwhile experience. I think people come in basically reasonably positive, expecting that it's going to be good, that they're going to learn something.”</p>
<p>Learning Groups</p>	<p>“By continually holding them to real life and making them grapple with it. so that's why the learning groups focus on real issues. The more emotion it holds, the more important it is. there's real theology in there but it's got to grasp with real life. It's why we do the, all the cross-cultural stuff, it's why there's such a focus on relationships.”</p>

Learning Groups	<p>“I've been more influenced by an American Quaker, Parker Palmer and his model of learning as being creating communities of trust in which ... so he talks about learning ... or teaching as creating a community of trust in which obedience to the truth can be practiced . . . so i've found him very encouraging and helpful. And i guess that what comes out of all that is a style of teaching, learning, education here that is quite relationally based that tries to treat people as adults and tries to build in our trainees skills in reflection and reflective learning. So ... what does that look like? where does the rubber hit the road on that? one of the things we started doing quite a few years ago was just running a group called Learning Groups. Where we say that the point of the group is to teach skills in self-reflection and we'll sit as a group, we run single gender groups, and we'll either discuss an issue that has come up in the life of the community . . . it might be an academic issue or an interpersonal issue, it could be anything ... or we ask them.”</p>
Learning Groups, female	<p>“different [Learning Groups] do different things. I think the female groups find this easier to do intuitively than the male groups. So the female groups will often go, "something hard has happened this week and we'd like to talk about it" and they'll get out a white board and they'll like, talk about 'I experienced anxiety when we this thing happened in the community' and we're all going to talk about, as a group, what triggered that anxiety and how I can manage it.</p>
Learning Groups, male	<p>I think the male groups find that more difficult to do because I think they find it harder to be vulnerable and I think they're generally less in touch with their feelings. So the male groups tend to, if we're not careful, default into talking about academic issues . . . talking at a conceptual level . . . so one of the ways [we] handle that in the male groups is to ask, people in turn, quite formally,... okay, next week I want you to pick an issue from your ministry experience and unpack it for us using a theological reflection cycle ... that talks about: What happened? How you felt about it? How you theologically reflected on that? . . . and What you'd do things differently if you could run it all again? And that's been, I think, very productive because most of the guys here have got significant ministry experiences and this semester, like, everyone has unpacked pretty major ministry conflicts that have been personally very costly for them.”</p>

<p>Staff diversity, tension and conflict, modelling, psychometrics.</p>	<p>[how the staff actual model diversity and how to resolve relationship issues as well].</p> <p>“yeah ... So I think that is a really important thing that we do. That we are a staff team who, personality wise, we're different and theologically we're not on the same page on all sorts of issues ... and we try to model to our trainees that we can get along with each other and serve Jesus together. Even though we're not theologically uniform or relationally identical. You know, it's not like we're all ISTJ on Myers-Briggs ... or all S's on the DISC profile. We're kind of all round both of those, different styles and preferences. So that ... that I think is a good thing for us to do. But ... the theological ... the fact that we aren't theologically on the same page ... probably isn't immediately obvious to the trainees. But over time they will start picking up that we're not always saying the same thing ... I guess the most obvious issue would be that we don't all believe the same thing on women in ministry but we can work alongside each other and that's been good I think. And I think people do notice that.</p> <p>[. . . because your students would have that as a theological divide at some point.]</p> <p>Yes. And sometimes that's been, in some groups that has been quite intense... with strongly complementarian, you know strongly sort of quite hardline complementarians in same groups as ordained women, you know ordained women priests from . . . , we've had that in the past.”</p>
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Appendix 4.A.3 Results – Phase 1 - Timetable Analysis

The timetable for the SAH courses from 2009-2018 were analysed by the researcher. The timetable was divided into nominally equal blocks of time, including mealtimes, common duties, and activities designed for weekends—attending church in another language. Blocks were assigned to 6 categories: Instrumental Learning; Communicative Learning; Reflective Learning; Holidays; Organisational learning; and other Admin. Only the IL, CL, and RL are shown below, appendix table 4.3 (307) and appendix figure 4.6 (306). Clearly there is a lot of the formal course time effectively allocated to Communicative Learning, around 50%.



Appendix Figure 4.6. Chart of SAH Timetable Analysis by Dimension

Appendix Table 4.3. SAH Timetable Analysis by Dimension

Cohort	Instrumental	Communicative	Reflective
2009-2	32%	50%	10%
2010-1	30%	46%	14%
2010-2	28%	52%	11%
2011-1	29%	46%	16%
2011-2	30%	49%	15%
2012-1	29%	53%	11%
2012-2	28%	56%	7%
2013-1	28%	55%	9%
2013-2	31%	54%	9%
2014-1	30%	54%	9%
2014-2	31%	53%	9%
2015-1	30%	54%	9%
2015-2	30%	54%	9%
2016-1	31%	54%	8%
2016-2	31%	54%	7%
2017-1	30%	53%	8%
2017-2	32%	51%	9%
2018-1	32%	54%	8%
2018-2	32%	53%	8%

Appendix 4.B Results - Phase 2 - Survey

Summary statistics for the various data sets are presented below, (see also discussion under methods Appendix 3.D.1.c, 279).

Appendix Table 4.4. Column Key to Data set descriptive statistics

Column Name	Description	Notes
Mean	Arithmetic mean of responses	Assumption of interval scale
Std.Dev	Standard Deviation	Assumption of interval scale
Median	Median value	Ordinal
Min	Minimum value	On numerical scale
Max	Maximum value	On numerical scale
Skew		
Kurtosis	Kurtosis adjusted to Normal distribution (=3)	i.e. absolute kurtosis -3
Norm	Summary result of Shapiro-Wilkes test of normality.	YES: $p > .05$ Semi: $p < .05$ but skew < 2 and kurtosis < 4 NO: otherwise.

Appendix 4.B.1 Overall Course Experience (OCE)

Appendix Table 4.5. Descriptive Statistics: OCE1 (n=125, q=8)

OCE1 Variable	Mean	Std.Dev	Median	Min	Max	Skew	Kurtosis	Norm
Enjoyable	4.30	0.83	4	1	5	-1.29	1.80	Semi
Easy	2.91	1.09	3	1	5	0.17	-0.89	Semi
Encouraging	4.34	0.86	5	1	5	-1.52	2.61	Semi
Relevant	4.45	0.90	5	1	5	-1.71	2.27	Semi
Necessary	4.47	0.79	5	1	5	-1.72	3.25	Semi
Timewellspent	4.50	0.89	5	1	5	-2.09	4.05	NO
Moneywellspent	4.48	0.88	5	1	5	-1.79	2.69	Semi
GoodPreparation	4.45	0.86	5	1	5	-1.75	2.83	Semi

Appendix Table 4.6. Descriptive Statistics: OCE2 (n=125, q=2)

OCE2 Variable	Mean	Std.Dev	Median	Min	Max	Skew	Kurtosis	Norm
TPVAS*								
Assessment/ Selection (Min)	3.65	0.78	4	1	5	-0.44	0.37	Semi
Training/ Preparation (Max)								
FCVIN								
Fixed Curriculum (Min)	2.79	0.85	3	1	5	0.02	-0.28	Semi
Individual (Max)								

**Note: Item scoring reversed for consistency of meaning so Training is max.*

Appendix Table 4.7. Descriptive Statistics: OCE3 (n=125, q=5)

OCE3 Variable	Mean	Std.Dev	Median	Min	Max	Skew	Kurtosis	Norm
Program	8.04	2.15	9	1	10	-1.55	1.82	Semi
Staff	8.07	2.11	9	1	10	-1.41	1.62	Semi
Location	9.14	1.08	9	5	10	-1.60	3.22	Semi
Facilities	6.42	2.04	7	0	10	-0.45	-0.10	Semi
Institution	8.22	1.97	9	2	10	-1.51	1.76	Semi

Appendix 4.B.2 Areas of Growth and Learning (AGL)

Appendix Table 4.8. Test of Multivariate Normality: AGL1 (n=125, q=15)

AGL1 Tests of Multivariate Normality	Statistic	p value	Result
Mardia Skewness	1640.3	0	NO
Mardia Kurtosis	18.5	0	NO
MVN			NO

Appendix Table 4.9. Descriptive Statistics: AGL1 (n=125, q=15)

AGL1	Mean	Std.Dev	Median	Min	Max	Skew	Kurtosis	Norm
BibleTheol	4.83	1.21	5	1	7	-0.82	0.26	Semi
Culture	6.19	0.91	6	2	7	-1.71	4.25	NO
Location	5.42	1.31	6	1	7	-0.90	0.69	Semi
Org	5.86	0.99	6	2	7	-1.55	3.92	Semi
Practical	5.25	1.29	6	2	7	-0.80	0.10	Semi
Research	5.05	1.28	5	1	7	-0.61	-0.14	Semi
CCRelation	5.92	1.04	6	2	7	-1.09	1.63	Semi
CRSkills	5.13	1.34	5	1	7	-0.91	0.67	Semi
Language	5.94	1.18	6	1	7	-1.33	1.82	Semi
FamilyTrans	5.50	1.29	6	2	7	-0.72	-0.02	Semi
Relating	5.70	0.94	6	2	7	-0.97	1.68	Semi
SelfPersonality	5.66	1.02	6	2	7	-0.72	0.69	Semi
HabitsSD	5.32	1.04	5	2	7	-0.91	1.29	Semi
RelationGod	5.47	1.01	6	2	7	-0.94	1.15	Semi
SelfCare	5.33	1.15	6	2	7	-0.91	0.46	Semi

Noted that of the AGL1 variables used in the model, Culture is the least normal, with Skew=-1.71 and Kurtosis=4.25. Mainly this indicates that most people learnt at a high level in this area.

Appendix 4.B.3 **Helps to Learning and Growth (HLG)**

This set was not used (see 4.B.3, 116) and full descriptive statistics are not presented.

Appendix 4.B.4 **Living in Community (LIC)**

This set was not used (see 4.B.4, 117) and full descriptive statistics are not presented.

Appendix 4.B.5 **Learning Community (LC)**

Appendix Table 4.10. Descriptive Statistics: LCS (n=125, q=5)

LCS	Mean	Std.Dev	Median	Min	Max	Skew	Kurtosis	Norm
Membership	4.44	0.80	5	2	5	-1.32	1.00	Semi
Academic Interests	3.94	1.00	4	1	5	-0.70	-0.19	Semi
Confidence to express Ideas	3.75	0.96	4	1	5	-0.37	-0.56	Semi
Trainee Ideas Used	3.68	1.05	4	1	5	-0.83	0.34	Semi
Belonging	4.51	0.76	5	2	5	-1.47	1.45	Semi

Appendix Table 4.11. Descriptive Statistics: LCD (n=125, q=8)

LCD	Mean	Std.Dev	Median	Min	Max	Skew	Kurtosis	Norm
Vulnerable	4.09	1.07	4	1	5	-1.15	0.63	Semi
Trust	4.22	1.03	5	1	5	-1.19	0.51	Semi
Help	4.58	0.69	5	1	5	-2.08	5.94	NO
Closeness	4.39	0.87	5	1	5	-1.64	2.80	Semi
Safe Learn environment	4.28	1.00	5	1	5	-1.40	1.41	Semi
Comfortable to Joke	4.14	1.03	4	1	5	-1.16	0.71	Semi
Separation	4.14	0.94	4	1	5	-1.21	1.47	Semi
Difficulty	3.74	1.11	4	1	5	-0.83	-0.04	Semi

Appendix 4.B.6 **Modes of Relationship (MOR)**

Appendix Table 4.12. Descriptive Statistics: MORS (n=125, q=4)

MORS	Mean	Std.Dev	Median	Min	Max	Skew	Kurtosis	Norm
H – Hierarchical	5.42	3.26	6	0	10	-0.24	-1.31	Semi
C – Communal	6.57	2.27	7	1	10	-0.67	-0.41	Semi
M – Matched	4.81	2.77	5	0	10	-0.10	-1.18	Semi
P – Priced	1.74	2.37	1	0	9	1.45	1.02	Semi

Appendix Table 4.13. Descriptive Statistics: MORT (n=125, q=4)

MORT	Mean	Std.Dev	Median	Min	Max	Skew	Kurtosis	Norm
H – Hierarchical	1.58	2.26	1	0	10	1.91	3.06	Semi
C – Communal	8.09	1.78	8	1	10	-1.54	2.69	Semi
M – Matched	6.83	2.56	8	0	10	-0.95	0.07	Semi
P – Priced	1.22	1.71	1	0	8	1.88	3.52	Semi

Appendix 4.B.7 **Tension and Conflict (TAC)**

Appendix Table 4.14. Descriptive Statistics: TAC1 (n=125, q=20)

TAC1	Mean	Std.Dev	Median	Min	Max	Skew	Kurtosis	Norm
Geog	4.89	1.12	5	1	6	-1.30	1.43	Semi
Generation	5.26	1.01	6	2	6	-1.46	1.75	Semi
Personality	4.13	1.20	4	1	6	-0.61	0.08	Semi
Habits	4.83	1.04	5	1	6	-0.87	0.87	Semi
WorkEthic	5.06	1.14	5	2	6	-0.99	0.07	Semi
Insensitivity	4.87	1.16	5	1	6	-0.88	0.16	Semi
Confidentiality	5.67	0.74	6	2	6	-2.51	6.45	NO
Music	5.72	0.59	6	3	6	-2.18	4.46	NO
Noise	5.51	0.79	6	3	6	-1.46	1.10	Semi
ChildParent	5.02	1.15	5	1	6	-0.94	0.06	Semi
PhilOfMin	4.82	1.23	5	1	6	-0.98	0.12	Semi
Theol	4.50	1.37	5	1	6	-0.67	-0.51	Semi
Time	5.28	0.87	5	2	6	-1.15	1.02	Semi
StaffConsult	5.05	1.30	6	1	6	-1.11	0.06	Semi
Engagement	5.13	1.11	6	2	6	-0.98	-0.26	Semi
Gender	5.10	1.15	6	1	6	-1.11	0.48	Semi
RulesVSituation	5.25	1.07	6	1	6	-1.53	2.12	Semi
TradVPrag	5.21	1.10	6	1	6	-1.42	1.57	Semi
PartyVRestraint	5.58	0.73	6	3	6	-1.76	2.47	Semi
Other	5.46	1.24	6	1	6	-2.29	4.11	NO

Appendix Table 4.15. Descriptive Statistics: TAC2 (n=125, q=5)

TAC2	Mean	Std.Dev	Median	Min	Max	Skew	Kurtosis	Norm
Affect	2.36	1.30	2	1	5	0.86	-0.39	Semi
Resolution	2.28	1.28	2	1	5	0.73	-0.61	Semi
BeliefSigTen	7.18	2.00	7	2	10	-0.44	-0.49	Semi
BeliefNecessity	2.97	1.20	3	0	5	-0.32	-0.35	Semi
HelpfulPrep	2.93	1.25	3	0	5	-0.59	0.00	Semi

Appendix 4.C Results - Phase 3 – Survey Analysis

Appendix 4.C.1 Results - Phase 3 – Task 1 – Model Development

Appendix 4.C.1.a Initial Correlation Matrix - AGL1

Confirmatory Factor Analysis and model development begins from the Correlation Matrix of the set of items.

Appendix Table 4.16. Areas of Growth and Learning (AGL1) – Correlation matrix (N=125)

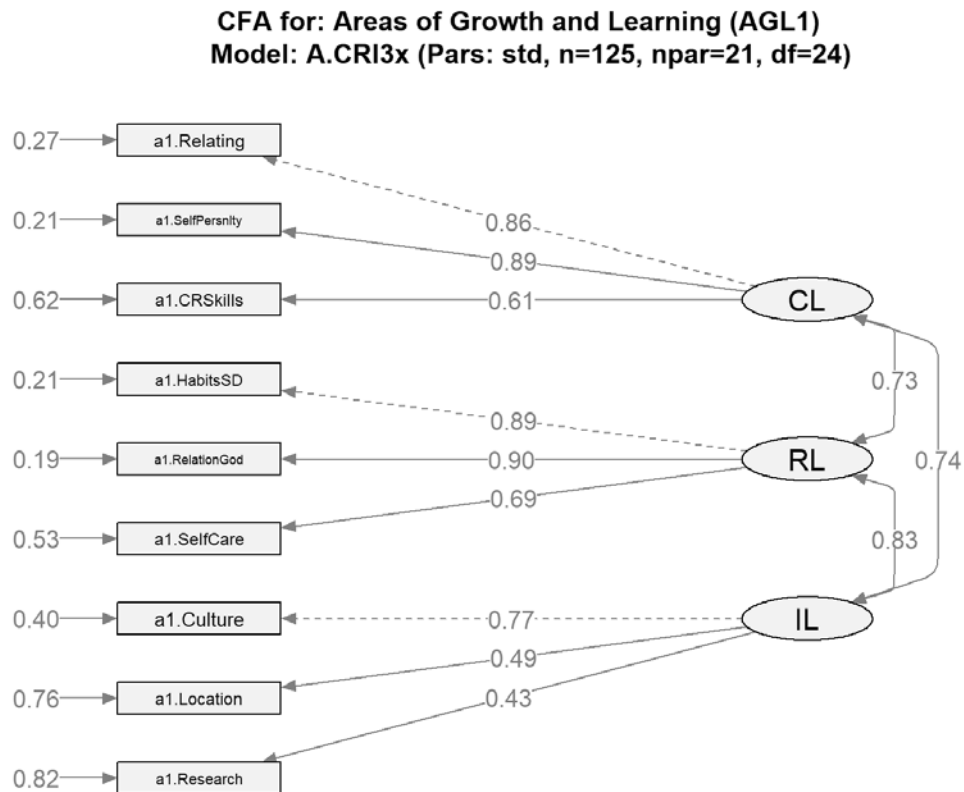
AGL1 Correlations	Bibl	Cult	Loca	Org	Prac	Rese	CCRe	CRSk	Lang	Fami	Rela	Self	Habi	Rela	Self
BibleTheol	1.00														
Culture	0.53	1.00													
Location	0.36	0.33	1.00												
Org	0.27	0.28	0.34	1.00											
Practical	0.35	0.52	0.24	0.50	1.00										
Research	0.30	0.32	0.24	0.26	0.37	1.00									
CCRelation	0.39	0.62	0.28	0.27	0.49	0.32	1.00								
CRSkills	0.35	0.42	0.15	0.28	0.43	0.32	0.49	1.00							
Language	0.16	0.27	0.22	0.14	0.15	0.26	0.31	0.20	1.00						
FamilyTrans	0.25	0.43	0.26	0.17	0.26	0.24	0.39	0.43	0.36	1.00					
Relating	0.36	0.48	0.25	0.33	0.30	0.19	0.45	0.49	0.26	0.43	1.00				
SelfPersonality	0.38	0.45	0.35	0.40	0.39	0.30	0.44	0.51	0.18	0.42	0.78	1.00			
HabitsSD	0.46	0.41	0.30	0.45	0.47	0.32	0.40	0.38	0.27	0.27	0.50	0.58	1.00		
RelationGod	0.57	0.47	0.28	0.30	0.45	0.31	0.48	0.40	0.26	0.41	0.51	0.55	0.75	1.00	
SelfCare	0.43	0.43	0.26	0.35	0.48	0.34	0.44	0.44	0.34	0.40	0.40	0.47	0.62	0.64	1

Appendix 4.C.1.b Results – A.CRI3x – Model Output

This appendix section contains summary tables for the preferred model, A.CRI3x.

Appendix Table 4.17. Summary of Model Descriptive Statistics and Loadings
A.CRI3x

Indicator	Mean	Std.Dev	Skew	Kurtosis	Latent Factor	B	SE	Beta
Culture	6.19	0.91	-1.71	4.25	IL	1.00	0.00	0.77
Location	5.42	1.31	-0.90	0.69	IL	0.90	0.19	0.49
Research	5.05	1.28	-0.61	-0.14	IL	0.78	0.30	0.43
Relating	5.70	0.94	-0.97	1.68	CL	1.00	0.00	0.86
Self Personality	5.66	1.02	-0.72	0.69	CL	1.12	0.15	0.89
CR Skills	5.13	1.34	-0.91	0.67	CL	1.01	0.12	0.61
Habits SD	5.32	1.04	-0.91	1.29	RL	1.00	0.00	0.89
Relation God	5.47	1.01	-0.94	1.15	RL	0.99	0.09	0.90
Self Care	5.33	1.15	-0.91	0.46	RL	0.85	0.12	0.69



Appendix Figure 4.7. Preferred Model for A.CRI3x

Appendix Table 4.18. Modification Indices for model: A.CRI3x (n=125) (min value=3.84)

	lhs	op	rhs	mi	epc	sepc.all	delta	ncp	power	decision
70	Relation God	~~	Culture	5.38	0.09	0.36	0.1	6.69	0.73	(m)
50	Relating	~~	Research	5.09	-0.14	-0.25	0.1	2.64	0.37	(m)

Appendix Table 4.19. Residual Correlations for model: A.CRI3x (n=125) (Signif.(> 0.1): 1 Max: 0.13 Num Obs.: 45 Proportion: 0.022)

	Relat	SelfP	CRSki	Habit	Relat	SelfC	Cultu	Locat	Resea
Relating									
SelfPersonality	0.00								
CRSSkills	0.01	-0.02							
HabitsSD	0.00	0.03	0.01						
RelationGod	-0.03	-0.02	0.03	0.00					
SelfCare	-0.03	0.03	0.08	0.00	0.00				
Culture	0.02	-0.02	0.06	-0.03	0.04	-0.01			
Location	-0.04	0.02	-0.08	0.00	-0.05	0.01	0.01		
Research	-0.08	0.03	0.13	0.02	-0.02	0.10	-0.04	0.09	

Appendix Table 4.20. Standardized Residual Correlations for model: A.CRI3x (n=125) (Signif.(> 1.96): 0 Max: 0 Num Obs.: 45 Proportion: 0)

	Relat	SelfP	CRSki	Habit	Relat	SelfC	Cultu	Locat	Resea
Relating									
SelfPersonality	0.30								
CRSSkills	0.24	-0.69							
HabitsSD	0.04	0.70	0.08						
RelationGod	-0.80	-0.63	0.46	0.16					
SelfCare	-0.65	0.51	1.17	-0.12	-0.14				
Culture	0.36	-0.42	1.00	-1.27	0.92	-0.11			
Location	-0.83	0.38	-1.11	-0.01	-0.84	0.12	0.18		
Research	-1.33	0.47	1.62	0.33	-0.35	1.12	-0.89	0.91	

Appendix 4.C.1.c Results – A.CRI3x – Fit Measures

Appendix Table 4.21. Fit measures for model A.CRI3x

Variable	Type	Pass Fit	Good Fit	Value	Test Result
Model+Data				A.CRI3x	in.Mat
ntotal				125	
nObs				45	
npar				21	
df.scaled				24	
chisq.scaled				22.6	
pvalue.scaled	>	0.005	0.05	0.545	Good
chisq_on_df	<=	3	2	0.9	Good
rmsea	<	0.08	0.03	0.035	Pass
rmsea.robust	<	0.08	0.03	0	Good
rmsea.ci. lower.robust				0	
rmsea.ci. upper.robust	<	0.1	0.08	0.075	Good
N_on_q	>=	5	10	6	Pass
kcft	<=	0.05	0.08	33%	Low
kncft	>=	0.05	0.01	21%	Low
kcftn	<=	0.05	0.08	375	
kncftn	>=	0.05	0.01	422	
srmr	<	0.08	0.05	0.04	Good
cfi.robust	>=	0.9	0.95	1	Good
nnfi.robust (=tli)	>=	0.95	0.97	1.005	Good
aic				2910.1	
bic				2969.5	
nTests				9	
CFAT				GG-GG-GGG	7.2

Appendix 4.C.1.d Results – A.CRI3x – Cronbach's Alpha

Cronbach's alpha calculations are provided as a confirmation. In appendix table 4.22 (320) the value for Cronbach's Alpha is given for each of the three factors.

Appendix Table 4.22. Table of Cronbach's Alpha for model A.CRI3x

Factor	Item Count	alpha	Item List
CL	3	0.80	Relating + SelfPersonality + CRSkills
RL	3	0.86	HabitsSD + RelationGod + SelfCare
IL	3	0.57	Culture + Location + Research

Appendix 4.C.1.e Results – A.CRI3x – Cronbach's Alpha Elimination

Cronbach's Alpha Elimination is summarized here. The items are sorted in ascending order for column 'alpha' which identifies the value of Cronbach's Alpha for the remainder of the set if this item was to be removed. The maximum value of Cronbach's α is obtained with the items above the line marked 'FULL' and discarding the items below. Thus for the set 'ALL QUESTIONS' in appendix table 4.23 (321), the bottom three items could be eliminated with a slight increase in Cronbach's Alpha. Similar runs were done for the three individual factors, appendix table 4.24 (321), appendix table 4.25 (322), and appendix table 4.26 (322). This is only a guide and in fact, these scales have good values without elimination of items being necessary, or no optimisation possible (IL).

Appendix Table 4.23. Cronbach's Alpha - Elimination for: A.CRI3x ALL QUESTIONS

	VarName	item	alpha	nItems	nSamp	rank	incl	bias	se	ci_L	ci_H
5	RelationGod	4	0.85	5	125	1	TRUE				
4	HabitsSD	3	0.85	5	125	2	TRUE				
3	SelfPersonality	2	0.86	5	125	3	TRUE				
2	Relating	1	0.87	5	125	4	TRUE				
7	Culture	6	0.88	5	125	5	TRUE				
6	SelfCare	5	0.88	5	125	6	TRUE				
1	FULL	0	0.89	6	125	7	TRUE	0	0.02	0.85	0.93
8	CRSkills	3	0.89	6	125	8	FALSE				
9	Research	8	0.88	7	125	9	FALSE				
10	Location	8	0.87	8	125	10	FALSE				

Appendix Table 4.24. Cronbach's Alpha - Elimination for: A.CRI3x Factor: IL

	VarName	item	alpha	nItems	nSamp	rank	incl	bias	se	ci_L	ci_H
3	Location	2	0.44	2	125	1	TRUE				
2	Culture	1	0.46	2	125	2	TRUE				
4	Research	3	0.53	2	125	3	TRUE				
1	FULL	0	0.57	3	125	4	0	0	0.07	0.44	0.71

Appendix Table 4.25. Cronbach's Alpha - Elimination for: A.CRI3x Factor: CL

VarName	item	alpha	nItems	nSamp	rank	incl	bias	se	ci_L	ci_H
3 SelfPersonality	2	0.67	2	125	1	TRUE				
2 Relating	1	0.67	2	125	2	TRUE				
1 FULL	0	0.80	3	125	3	0	0	0.04	0.72	0.89
4 CRSkills	3	0.87	2	125	4	TRUE				

Appendix Table 4.26. Cronbach's Alpha - Elimination for: A.CRI3x Factor: RL

VarName	item	alpha	nItems	nSamp	rank	incl	bias	se	ci_L	ci_H
3 RelationGod	2	0.75	2	125	1	TRUE				
2 HabitsSD	1	0.76	2	125	2	TRUE				
1 FULL	0	0.86	3	125	3	0	0	0.03	0.8	0.92
4 SelfCare	3	0.89	2	125	4	TRUE				

Appendix 4.C.2 **Results – Phase 3 - Task 2 – Analysis of Influences**

The Generalised Linear Mixed Model (GLMM) analysis ran to over 200 pages, which have not been included here. Main results for this analysis were presented in chapter 4, 4.C.2 (143).

Two sets of more detailed results are presented here:

- First, a longer set of summary results is presented here with output from the main model runs for just one of the six influences, Trainee: Appendix 4.C.2.b (324), Appendix 4.C.2.c (325), Appendix 4.C.2.d (326), Appendix 4.C.2.e (327), and Appendix 4.C.2.f (328).
- Second, summary charts for each of the six influences for model m0 and the m2 interactions with age: Staff Appendix 4.C.2.g (329), Mentors Appendix 4.C.2.h (330), Trainees Appendix 4.C.2.i (331), External Community Appendix 4.C.2.j (332), Research Appendix 4.C.2.k (333), and Self-Reflection Appendix 4.C.2.l (334).

Also included are two charts showing contributions of each influence in each dimension for cohorts before 2008, appendix figure 4.21 (335), and from 2008 onwards, appendix figure 4.22 (336).

Appendix 4.C.2.a Summary of GLMM Model forms

Appendix Table 4.27. Summary of Model Forms and result of optimization runs, Trainee models

Model	IVar	Formula	Finish Code	Optimizer Message
m0	TR	(1 Participant) + QnD	OK	None
m1	TR	(1 Participant) + (1 QnD) + DGL	OK	None
m2	TR	(1 Participant) + (1 QnD) + DGL * AgeProp + Post2008	OK	None
m3	TR	(1 Participant) + (1 QnD) + DGL + Post2008 + GenderF + Married + Children + Perinatal	OK	None

Appendix 4.C.2.b Influence of Trainees - Model 0 - GLMM Output

Model 0 assumes just the questions and does not use the allocation to the three dimensions. Note the model takes the first item (QnDIL.Culture) as the reference point. As can be seen, the questions marked as IL (QnDIL.xxx) all have negative estimates and are substantially below the average, whereas those marked CL (QnDCL.xxx) and RL (QnDRL.xxx) are positive.

Appendix Table 4.28. GLMM Output, Influence of Trainees, Model 0

```
## Generalized linear mixed model fit by maximum likelihood (Laplace
## Approximation) [glmerMod]
## Family: binomial ( logit )
## Formula: Trainee ~ (1 | Participant) + QnD
## Data: data_2
##
##      AIC      BIC    logLik deviance df.resid
##  1877.1   1965.7   -922.6   1845.1     1859
##
## Scaled residuals:
##      Min       1Q   Median       3Q      Max
## -2.7915 -0.5470 -0.3003  0.5441 10.3509
##
## Random effects:
##   Groups      Name      Variance Std.Dev.
## Participant (Intercept) 1.397     1.182
## Number of obs: 1875, groups: Participant, 125
##
## Fixed effects:
##              Estimate Std. Error z value Pr(>|z|)
## (Intercept)    -1.25146    0.24787  -5.049 4.45e-07 ***
## QnDIL.Location    -2.77742    0.56858  -4.885 1.04e-06 ***
## QnDIL.Research    -2.14791    0.46321  -4.637 3.54e-06 ***
## QnDCL.CRSkills     1.02472    0.30090   3.406 0.000660 ***
## QnDCL.Relating     1.86061    0.30748   6.051 1.44e-09 ***
## QnDCL.SelfPersonality 0.51448    0.30410   1.692 0.090681 .
## QnDRL.HabitsSD     0.47021    0.30465   1.543 0.122730
## QnDRL.RelationGod   0.68828    0.30237   2.276 0.022830 *
## QnDRL.SelfCare     0.19509    0.30912   0.631 0.527978
## QnD0.BibleTheol    0.38042    0.30591   1.244 0.213668
## QnD0.CCRelation    0.04984    0.31225   0.160 0.873170
## QnD0.FamilyTrans    0.73102    0.30205   2.420 0.015512 *
## QnD0.Language     -1.49843    0.39149  -3.828 0.000129 ***
## QnD0.Org           -0.49323    0.32936  -1.498 0.134257
## QnD0.Practical     -0.68275    0.33765  -2.022 0.043169 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Appendix 4.C.2.c Influence of Trainees - Model 1 - GLMM Output

In this model just the allocated dimensions are tested. Participant and Question are assumed to be less important, a 'Random effect'.

Appendix Table 4.29. GLMM Output, Influence of Trainees, Model 1

```
## Generalized linear mixed model fit by maximum likelihood (Laplace
## Approximation) [glmerMod]
## Family: binomial ( logit )
## Formula: Trainee ~ (1 | Participant) + (1 | QnD) + DGL
## Data: data_2
##
##          AIC          BIC    logLik deviance df.resid
##    1905.4    1938.6    -946.7   1893.4     1869
##
## Scaled residuals:
##      Min       1Q   Median       3Q      Max
## -2.5731 -0.5456 -0.3116  0.5779  8.0154
##
## Random effects:
##   Groups             Name             Variance Std.Dev.
## Participant (Intercept) 1.3752      1.1727
## QnD                (Intercept) 0.4738      0.6883
## Number of obs: 1875, groups: Participant, 125; QnD, 15
##
## Fixed effects:
##              Estimate Std. Error z value Pr(>|z|)
## (Intercept)  -2.7741     0.4623  -6.000 1.97e-09 ***
## DGLCL         2.6536     0.6118   4.337 1.44e-05 ***
## DGLRL         1.9724     0.6112   3.227 0.00125 **
## DGL0          1.2883     0.5365   2.402 0.01632 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Correlation of Fixed Effects:
##      (Intr) DGLCL DGLRL
## DGLCL -0.716
## DGLRL -0.713 0.539
## DGL0  -0.808 0.611 0.610
```

Appendix 4.C.2.d Influence of Trainees - Model 2 - GLMM Output

This model adds an ‘interaction’ between the Dimension and Age. AgeProp is a Age divided by 100 so that the variables are easily estimated.

Appendix Table 4.30. GLMM Output, Influence of Trainees, Model 2

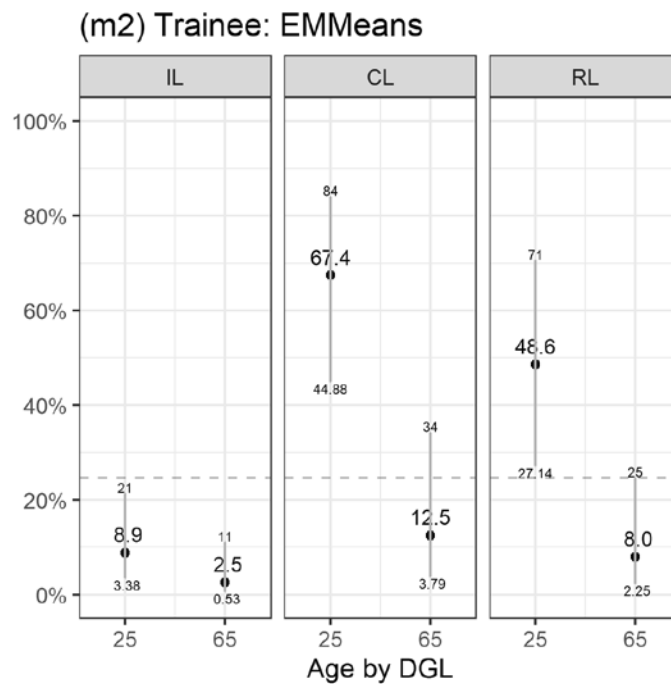
```
## Generalized linear mixed model fit by maximum likelihood (Laplace
## Approximation) [glmerMod]
## Family: binomial ( logit )
## Formula: Trainee ~ (1 | Participant) + (1 | QnD) + DGL * AgeProp +
Post2008
## Data: data_2
##
## AIC      BIC    logLik deviance df.resid
## 1892.4    1953.3   -935.2   1870.4     1864
##
## Scaled residuals:
##      Min       1Q   Median       3Q      Max
## -2.8548 -0.5445 -0.3064  0.5305  7.9393
##
## Random effects:
## Groups      Name                Variance Std.Dev.
## Participant (Intercept) 1.2312     1.110
## QnD            (Intercept) 0.4733     0.688
## Number of obs: 1875, groups: Participant, 125; QnD, 15
##
## Fixed effects:
##              Estimate Std. Error z value Pr(>|z|)
## (Intercept)   -1.4305     0.9237  -1.549  0.121446
## DGLCL         3.8952     1.0540   3.695  0.000219 ***
## DGLRL         2.9353     1.0542   2.784  0.005364 **
## DGL0          0.6924     0.9473   0.731  0.464786
## AgeProp       -3.3293     2.2609  -1.473  0.140873
## Post20081     -0.1332     0.2575  -0.517  0.604972
## DGLCL:AgeProp -3.3508     2.3617  -1.419  0.155959
## DGLRL:AgeProp -2.6464     2.3854  -1.109  0.267261
## DGL0:AgeProp  1.6215     2.1703   0.747  0.454988
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Correlation of Fixed Effects:
##              (Intr) DGLCL  DGLRL  DGL0    AgePrp P20081 DGLCL: DGLRL:
## DGLCL         -0.704
## DGLRL         -0.698  0.616
## DGL0          -0.774  0.679  0.677
## AgeProp       -0.850  0.566  0.561  0.625
## Post20081     -0.004 -0.005 -0.003 -0.002 -0.190
## DGLCL:AgPrp   0.621 -0.814 -0.541 -0.598 -0.707  0.004
## DGLRL:AgPrp   0.608 -0.535 -0.815 -0.590 -0.694  0.002  0.666
## DGL0:AgePrp   0.667 -0.584 -0.582 -0.824 -0.764  0.001  0.729  0.719
```

Appendix 4.C.2.e Influence of Trainees - Model 2 – Age interactions

The significance is clear that respondents are much more likely to name fellow Trainees as important influences in CL and RL at age 25 than at age 65.

Appendix Table 4.31. GLMM Output, Influence of Trainees, Model 2, Odds Ratios for DGL interactions with AGE

```
## DGL = IL:
## contrast odds.ratio SE df z.ratio p.value
## 0.25 / 0.65 3.79 3.43 Inf 1.473 0.1409
##
## DGL = CL:
## contrast odds.ratio SE df z.ratio p.value
## 0.25 / 0.65 14.47 10.25 Inf 3.772 0.0002
##
## DGL = RL:
## contrast odds.ratio SE df z.ratio p.value
## 0.25 / 0.65 10.92 7.95 Inf 3.282 0.0010
##
## Results are averaged over the levels of: Post2008
## Tests are performed on the log odds ratio scale
```



Appendix Figure 4.8. Estimated Marginal Means - Model m2, Trainees

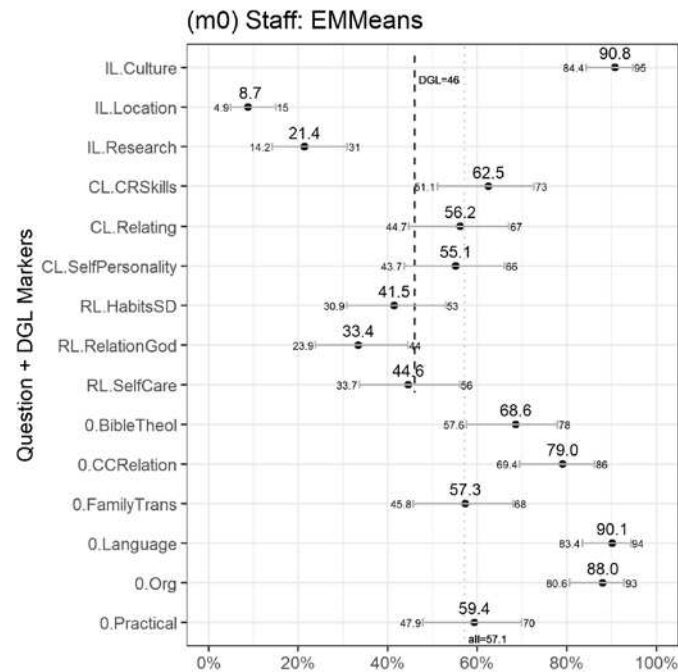
Appendix 4.C.2.f Influence of Trainees - Model 3 - GLMM Output

This model output shows that for fellow Trainees, none of the various demographic splits are important (Pre-2008 vs. Post-2008, Male vs. Female, Married vs. Single, With Children vs. Without Children, and Perinatal vs. Not Perinatal).

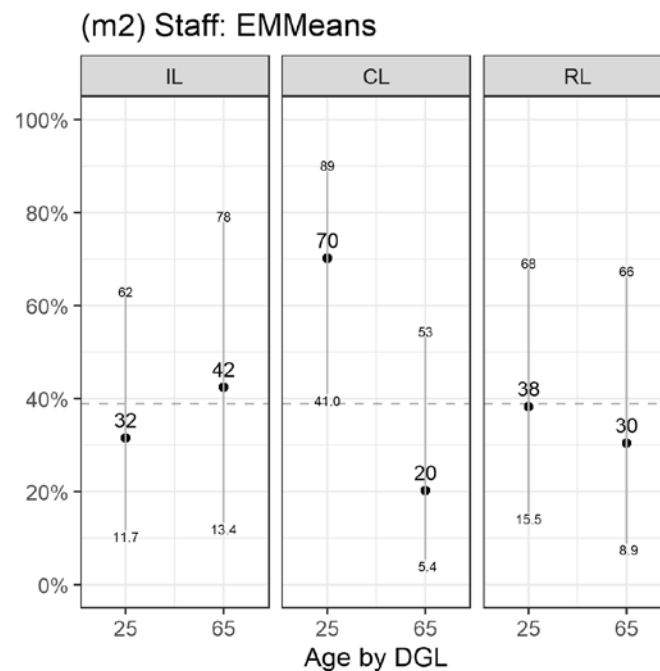
Appendix Table 4.32. GLMM Output, Influence of Trainees, Model 3

```
## Generalized linear mixed model fit by maximum likelihood (Laplace
## Approximation) [glmerMod]
## Family: binomial ( logit )
## Formula: Trainee ~ (1 | Participant) + (1 | QnD) + DGL + Post2008 +
GenderF +
## Married + Children + Perinatal
## Data: data_2
##
##          AIC          BIC    logLik deviance df.resid
##    1912.8     1973.7    -945.4   1890.8     1864
##
## Scaled residuals:
##      Min       1Q   Median       3Q      Max
## -2.5267 -0.5444 -0.3112  0.5701  8.2084
##
## Random effects:
##   Groups             Name             Variance Std.Dev.
##   Participant (Intercept) 1.3444      1.1595
##   QnD              (Intercept) 0.4737      0.6882
## Number of obs: 1875, groups: Participant, 125; QnD, 15
##
## Fixed effects:
##              Estimate Std. Error z value Pr(>|z|)
## (Intercept) -2.44449    0.59313  -4.121 3.77e-05 ***
## DGLCL        2.65362    0.61164   4.339 1.43e-05 ***
## DGLRL        1.97199    0.61097   3.228 0.00125 **
## DGL0         1.28800    0.53631   2.402 0.01632 *
## Post20081    -0.39875    0.25774  -1.547 0.12183
## GenderF1      0.03830    0.25661   0.149 0.88134
## Married1     -0.09217    0.40347  -0.228 0.81930
## Children1    -0.01905    0.32028  -0.059 0.95258
## Perinata11   -0.05001    0.36109  -0.139 0.88984
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Correlation of Fixed Effects:
##              (Intr) DGLCL  DGLRL  DGL0   P20081 GndrF1 Marrd1 Chldr1
## DGLCL        -0.554
## DGLRL        -0.553  0.539
## DGL0         -0.627  0.611  0.610
## Post20081    -0.249 -0.008 -0.005 -0.004
## GenderF1     -0.376  0.000 -0.001 -0.001 -0.003
## Married1     -0.371 -0.002 -0.002 -0.002 -0.158  0.189
## Children1    -0.076  0.000  0.000  0.000  0.189  0.074 -0.556
## Perinata11   0.024  0.000  0.000  0.001  0.053 -0.101 -0.064 -0.194
```

Appendix 4.C.2.g Influence of Staff – Summary m0 and m2-Age

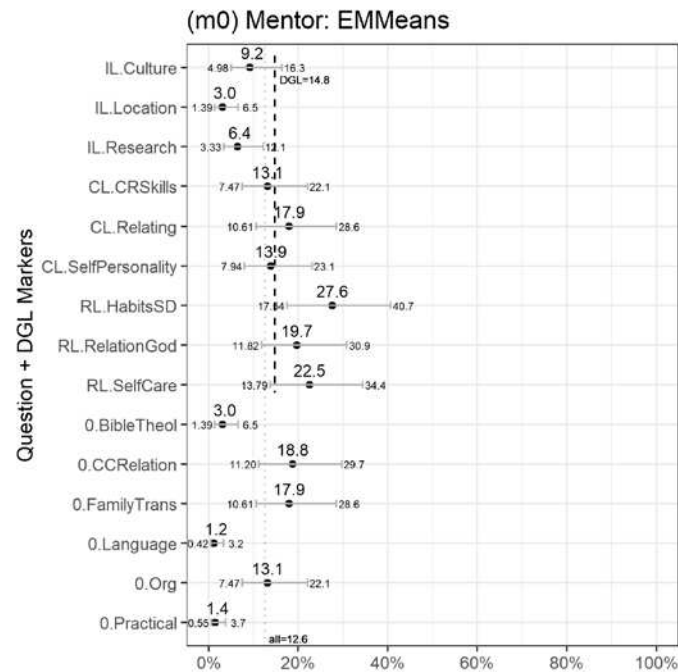


Appendix Figure 4.9. Estimated probability of mention for teaching Staff as important influences in growth and learning for each question area. (Model m0)

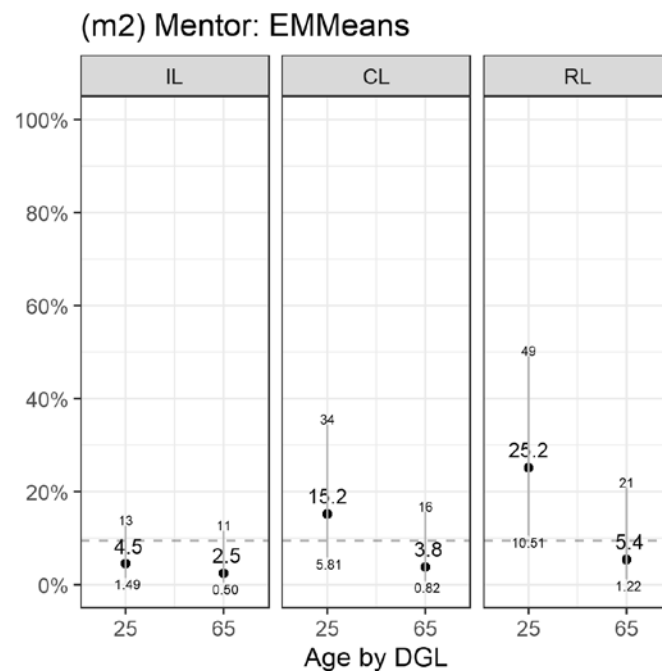


Appendix Figure 4.10. Estimated Marginal Means for Staff by DGL and Age (model m2)

Appendix 4.C.2.h Influence of Mentors – Summary m0 and m2-Age

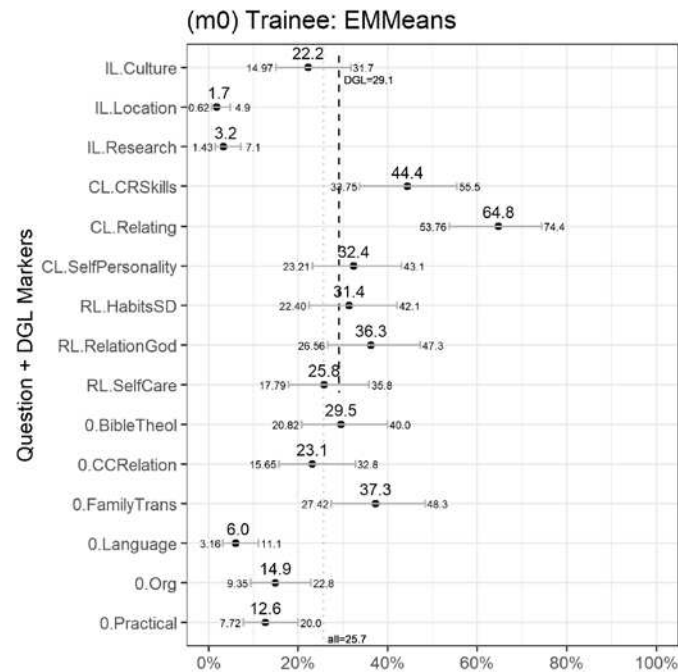


Appendix Figure 4.11. Estimated probability of mention for Mentor as important influences in growth and learning for that area. (Model m0)

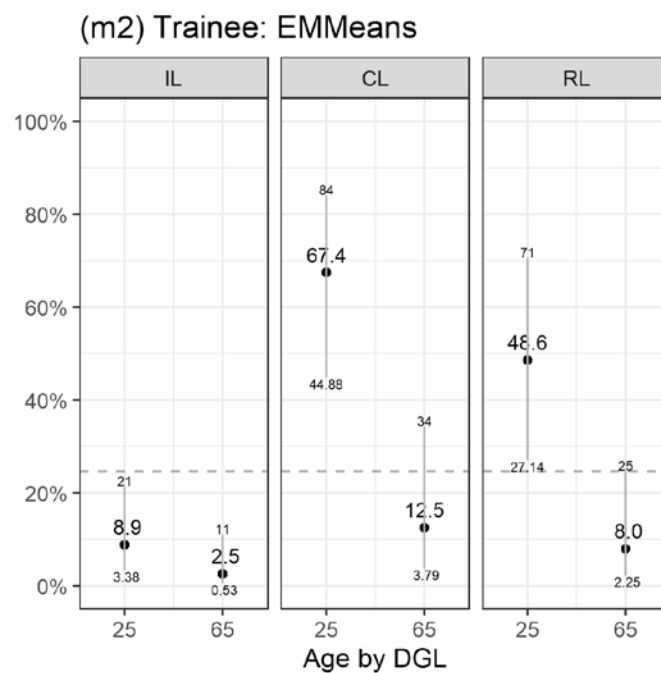


Appendix Figure 4.12. Estimated marginal means for Mentor by DGL and Age (model m2)

Appendix 4.C.2.i Influence of Trainees – Summary m0 and m2-Age

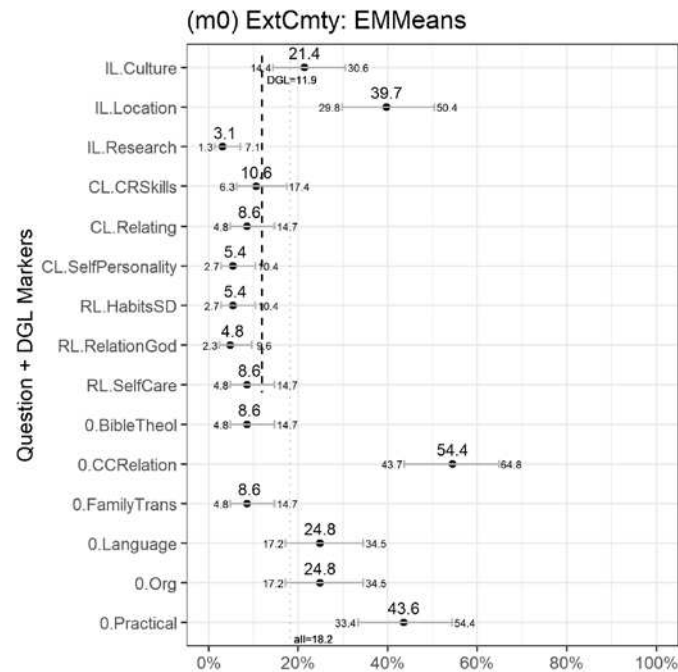


Appendix Figure 4.13. Estimated probability of mention for fellow Trainees as important influences in growth and learning for that area. (Model m0)

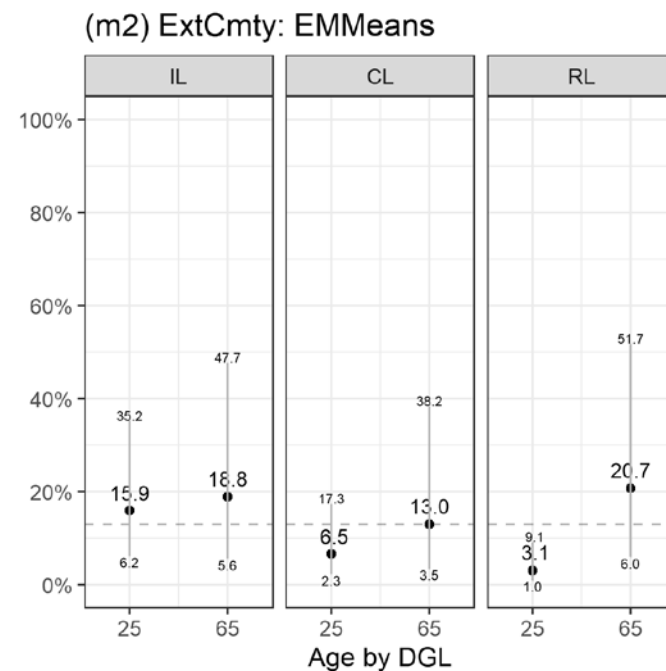


Appendix Figure 4.14. Trainee by Age

Appendix 4.C.2.j Influence of Ext. Community – Summary m0 and m2-Age



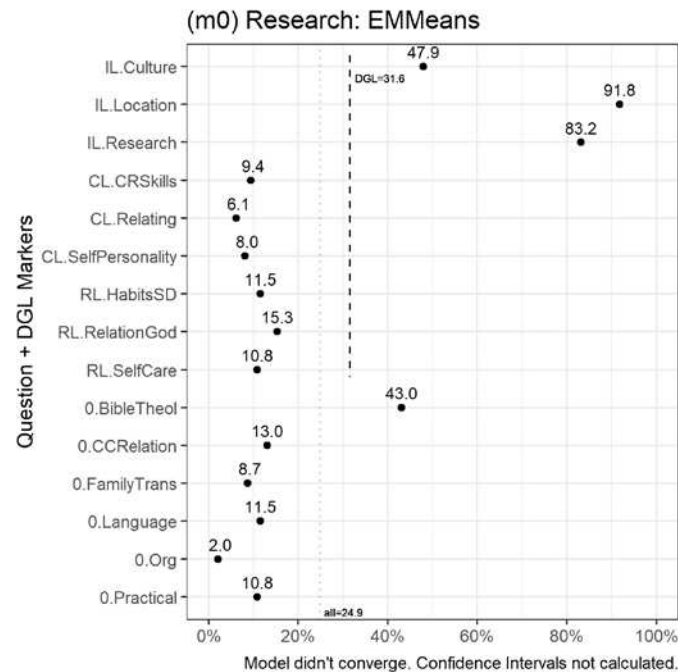
Appendix Figure 4.15. Estimated probability of mention for External Community as important influences in growth and learning for that area. (Model m0)



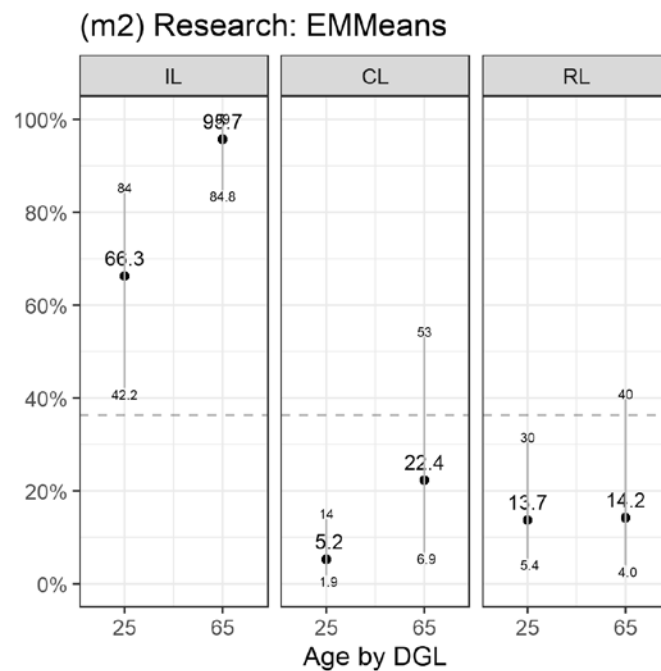
Appendix Figure 4.16. External Community by DGL and Age

Appendix 4.C.2.k Influence of Research – Summary m0 and m2-Age

Although this model did not converge and confidence intervals could not be calculated, the estimates are considered adequate and were confirmed by direct methods of calculating marginal means.

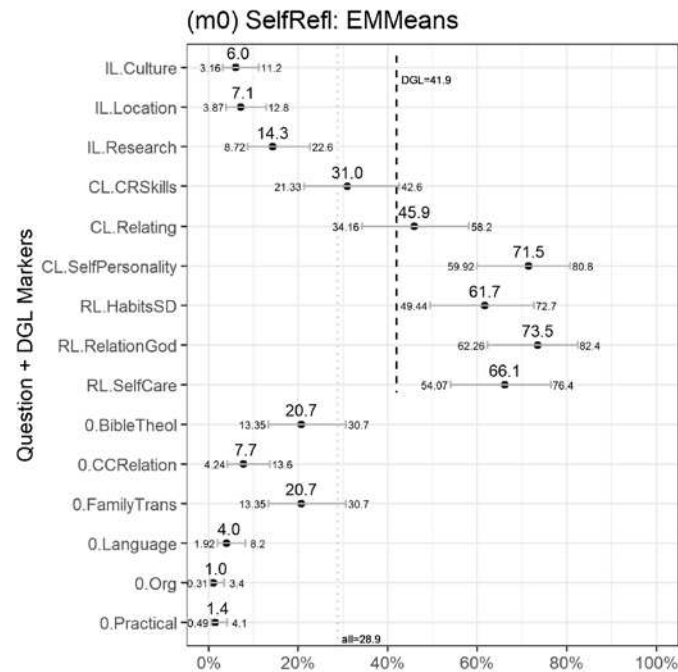


Appendix Figure 4.17. Estimated probability of mention for Research as important influences in growth and learning for that area. (Model m0)

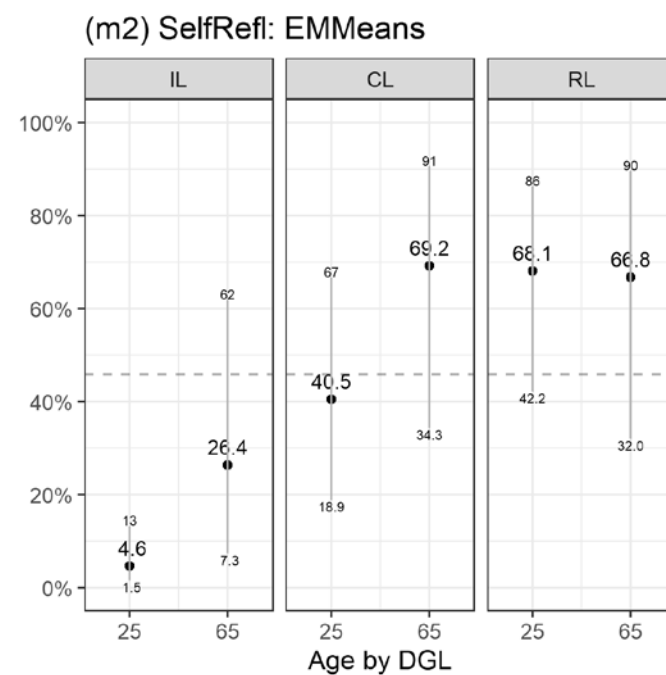


Appendix Figure 4.18. Estimated probability of mention for Research by DGL and Age (model m2)

Appendix 4.C.2.1 Influence of Self-Reflection – Summary m0 and m2-Age

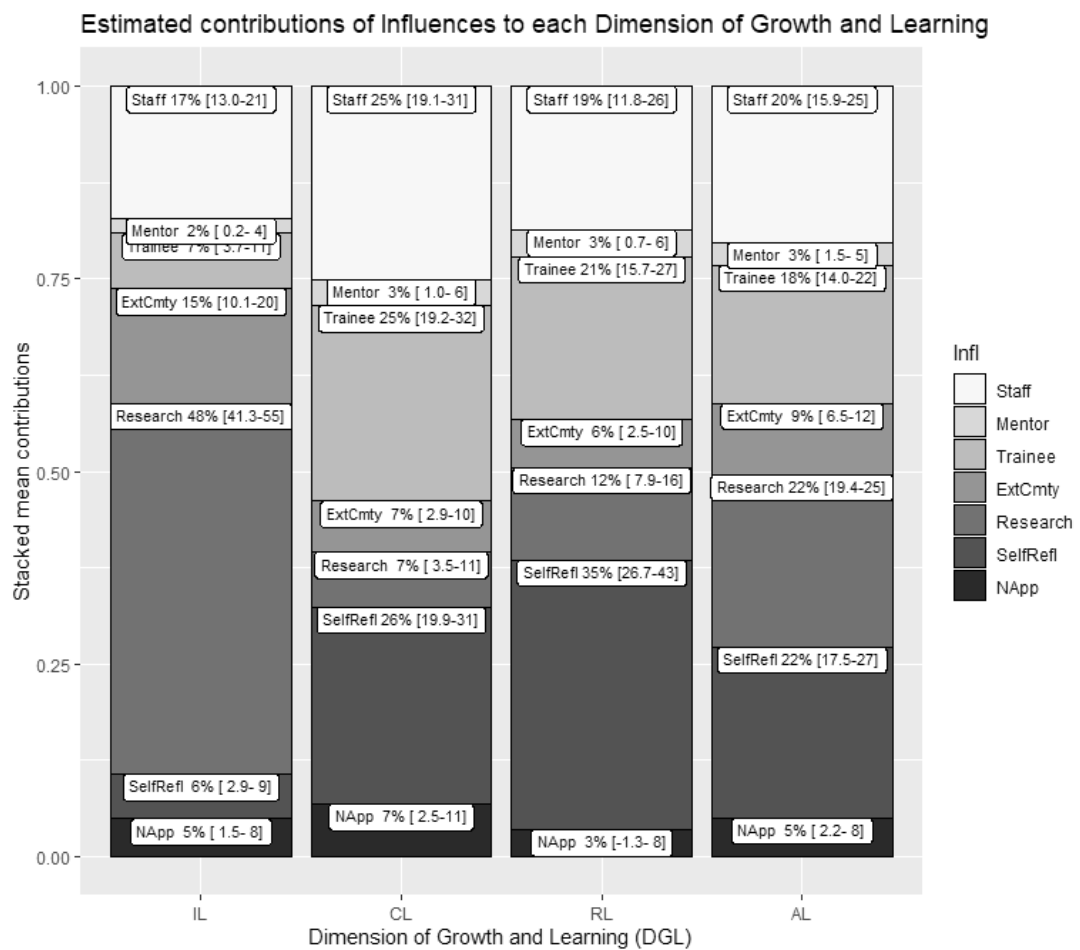


Appendix Figure 4.19. Model estimated probability of mention for Self-Reflection

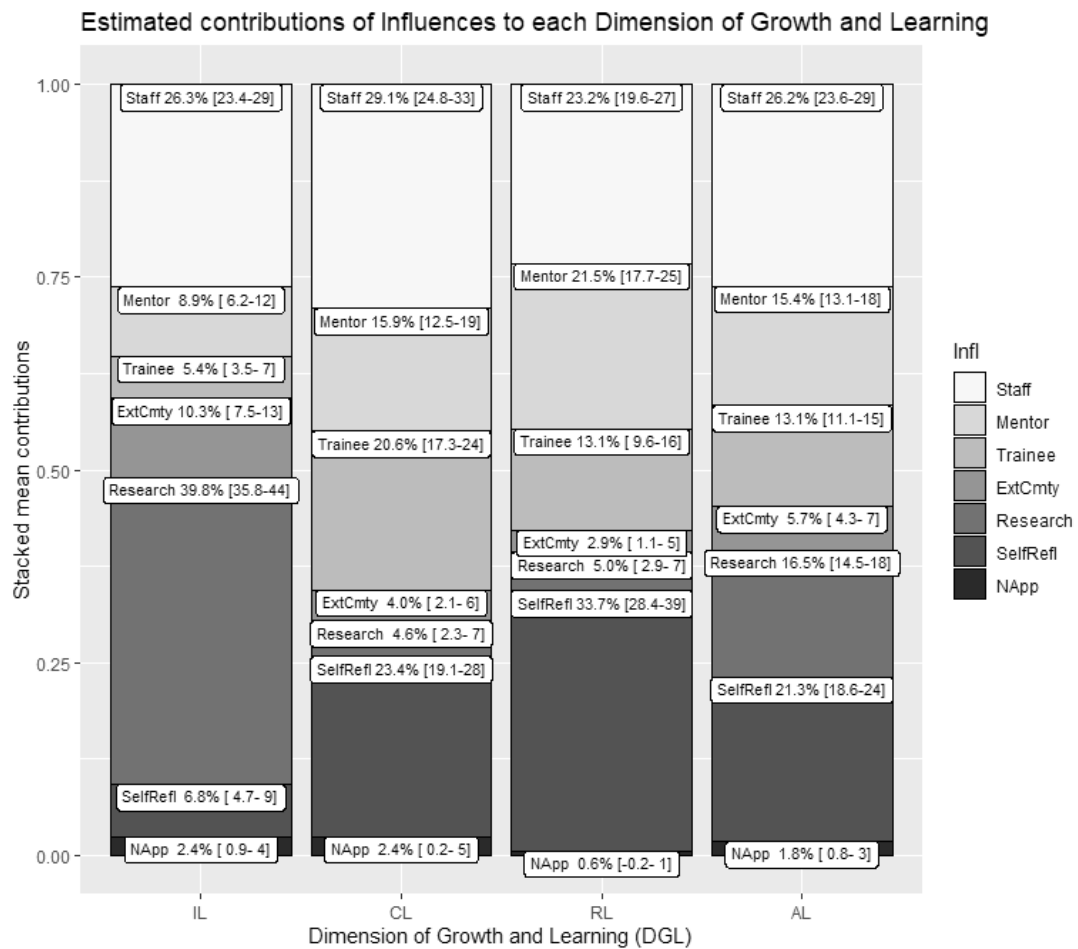


Appendix Figure 4.20. Self-reflection

Appendix 4.C.2.m Estimated Contributions of Influences – Pre2008 and Post2008



Appendix Figure 4.21. Estimated Contributions of Influences, Pre2008, to Dimensions of Growth and Learning with 95% confidence intervals (Trainees from cohorts Pre 2008 only, n=44)



Appendix Figure 4.22. Estimated Contributions of Influences, Post2008, to Dimensions of Growth and Learning with 95% confidence intervals (Trainees from cohorts of 2008 and following only, n=81)

Appendix 4.C.3 Results – Phase 3 - Task 3 – Other Evidence

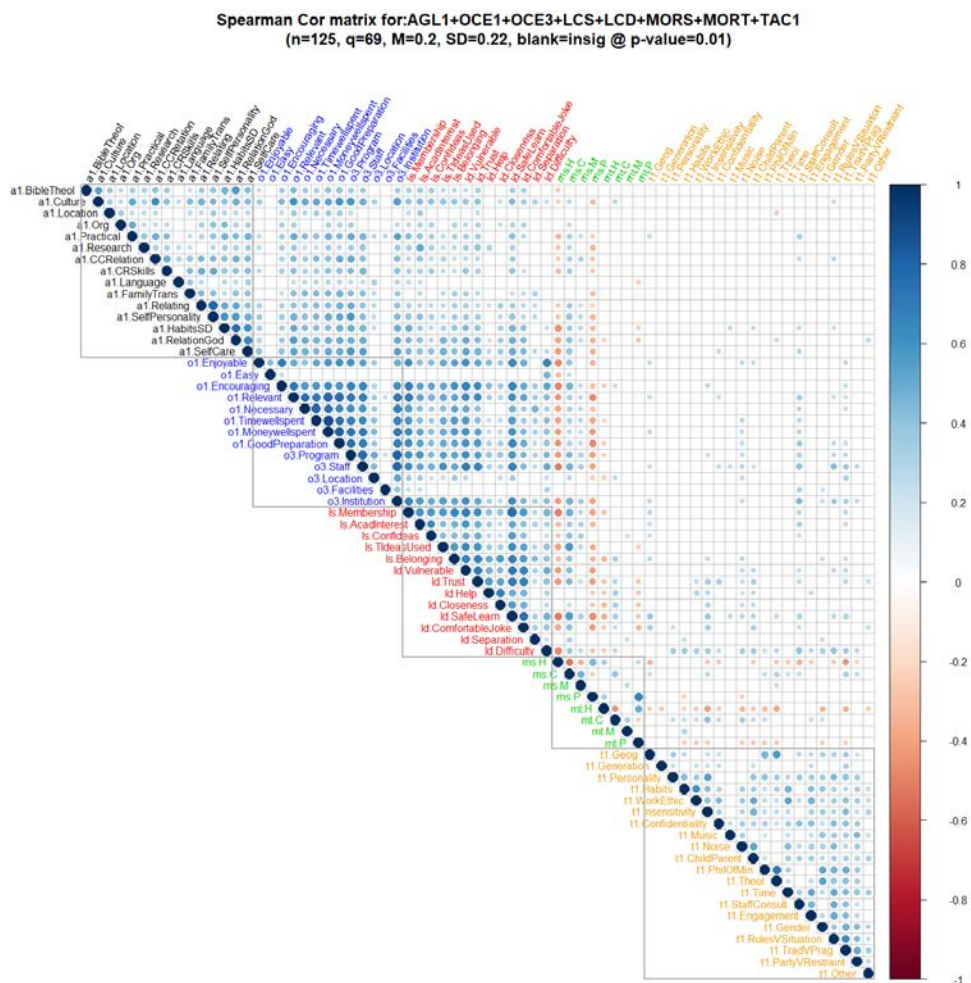
Appendix 4.C.3.a Graphical Correlation Matrix

This graphical format has been chosen to illustrate the areas where correlations were found to be strong (large dark circle), where they were weak (small light circle). And where they are statistically insignificant (blank cell).

Five sets of questions have been combined into the one matrix. They are coloured and also indicated with boxes. In order across the top:

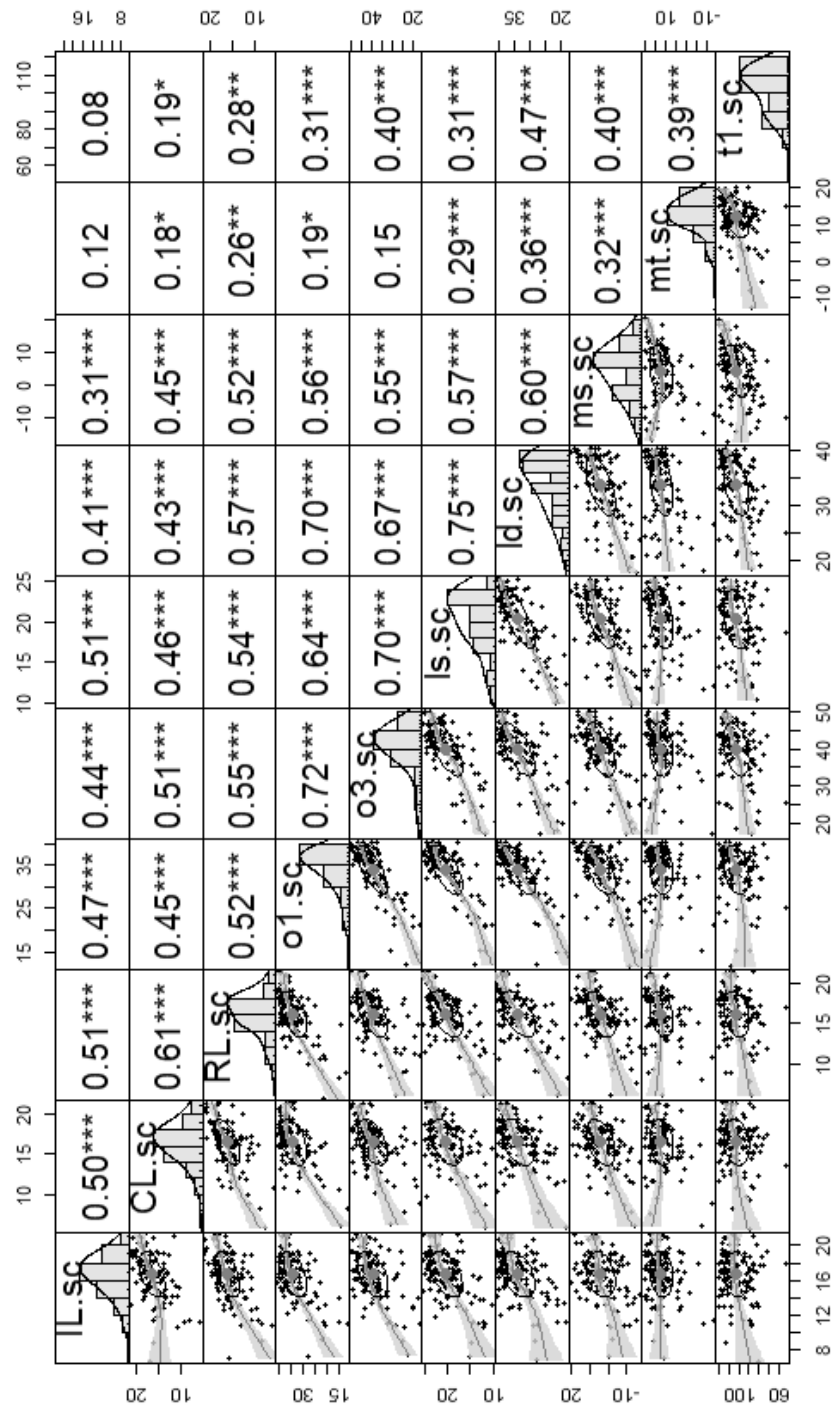
- ☐ Areas of Growth and Learning (AGL1) - black
- ☐ Overall Course Experience (OCE1 and OCE3) - blue
- ☐ Learning Community (LCS and LCD) - red
- ☐ Modes of Relationship (MORS and MORT) – green
- ☐ Tension and Conflict (TAC1) – tan

Note strong correlations on the left, but very few significant correlations in the upper right corner. Tentatively, this suggests there is little perceived learning value for the kinds of tension and conflict found in the course.



Appendix Figure 4.23. Large Correlation Matrix for main question items

Appendix 4.C.3.b Correlations between Question Set Scores



Appendix Figure 4.24. DGL correlations with other question set scores

Appendix 4.C.3.c Overall Course Experience

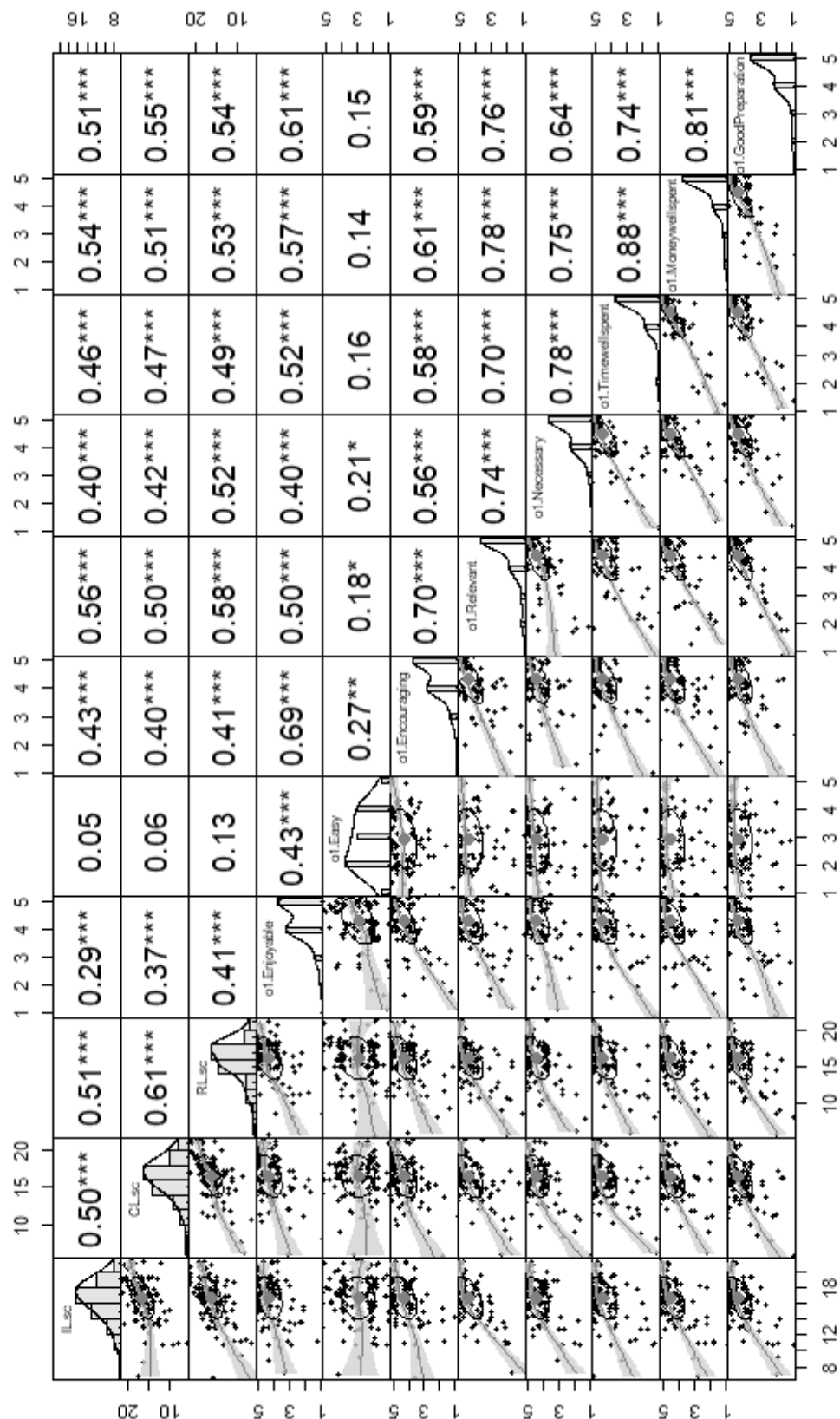
The strongest correlation between reported Areas of Growth and Learning Scale were with the Overall Course Experience measures.

Two sets of questions related to the overall Course Experience, OCE1 and OCE3, and the results are divided mainly for convenience of presentation.

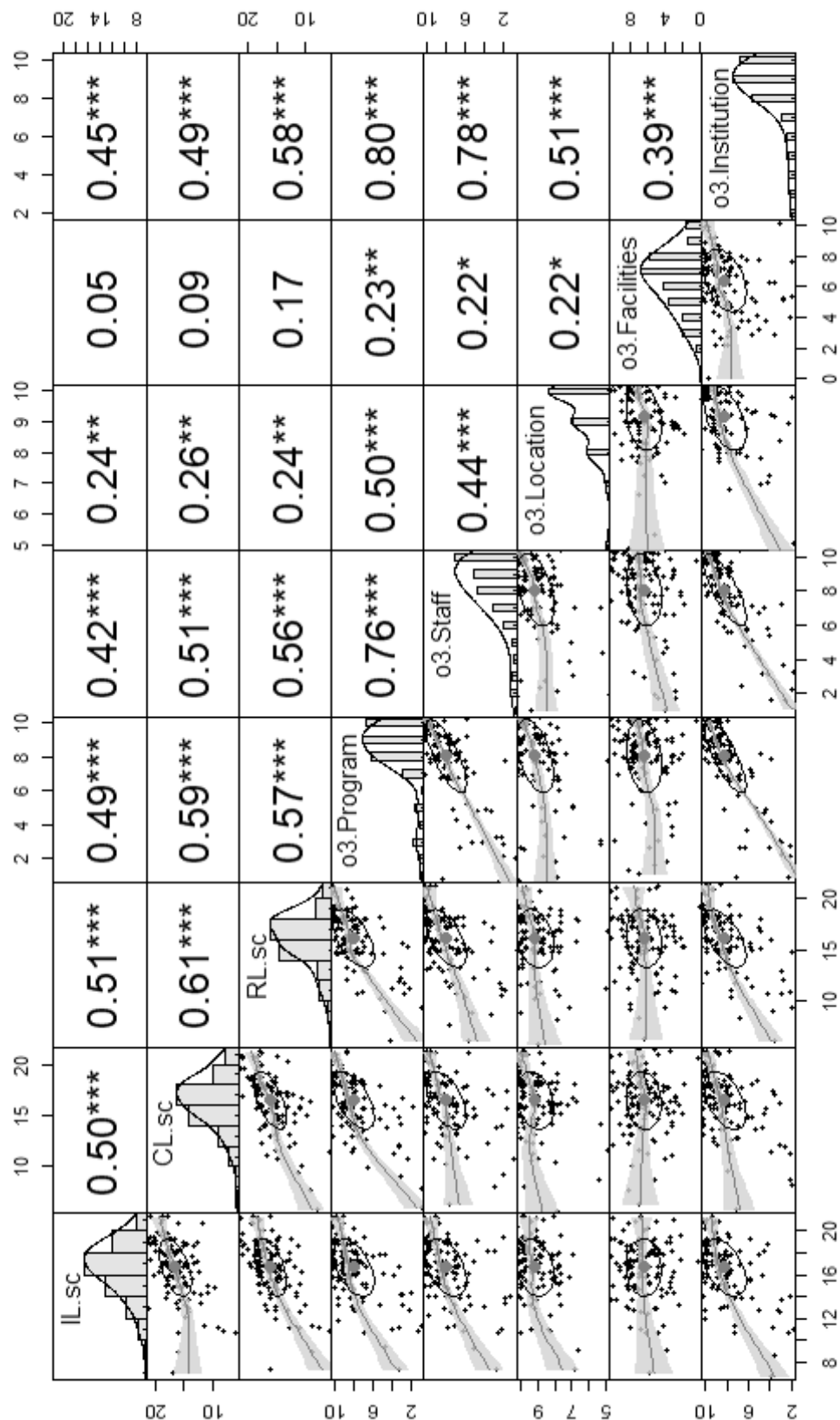
With the exception of 'Easy' and 'Enjoyable,' there was little difference between the three DGL scores in correlations to OCE1 question, (see appendix figure 4.25, 340).

There were some larger differences in considering the OCE3 questions with generally higher correlations with the RL and CL dimensions, (see appendix figure 4.26, 341).

Overall, those who report most growth and learning also reported better overall course experiences.



Appendix Figure 4.25. DGL correlations with Overall Course Enjoyment (OCE1)



Appendix Figure 4.26. DGL correlations with Overall Course Enjoyment (OCE3)

Appendix 4.C.3.d Learning Community

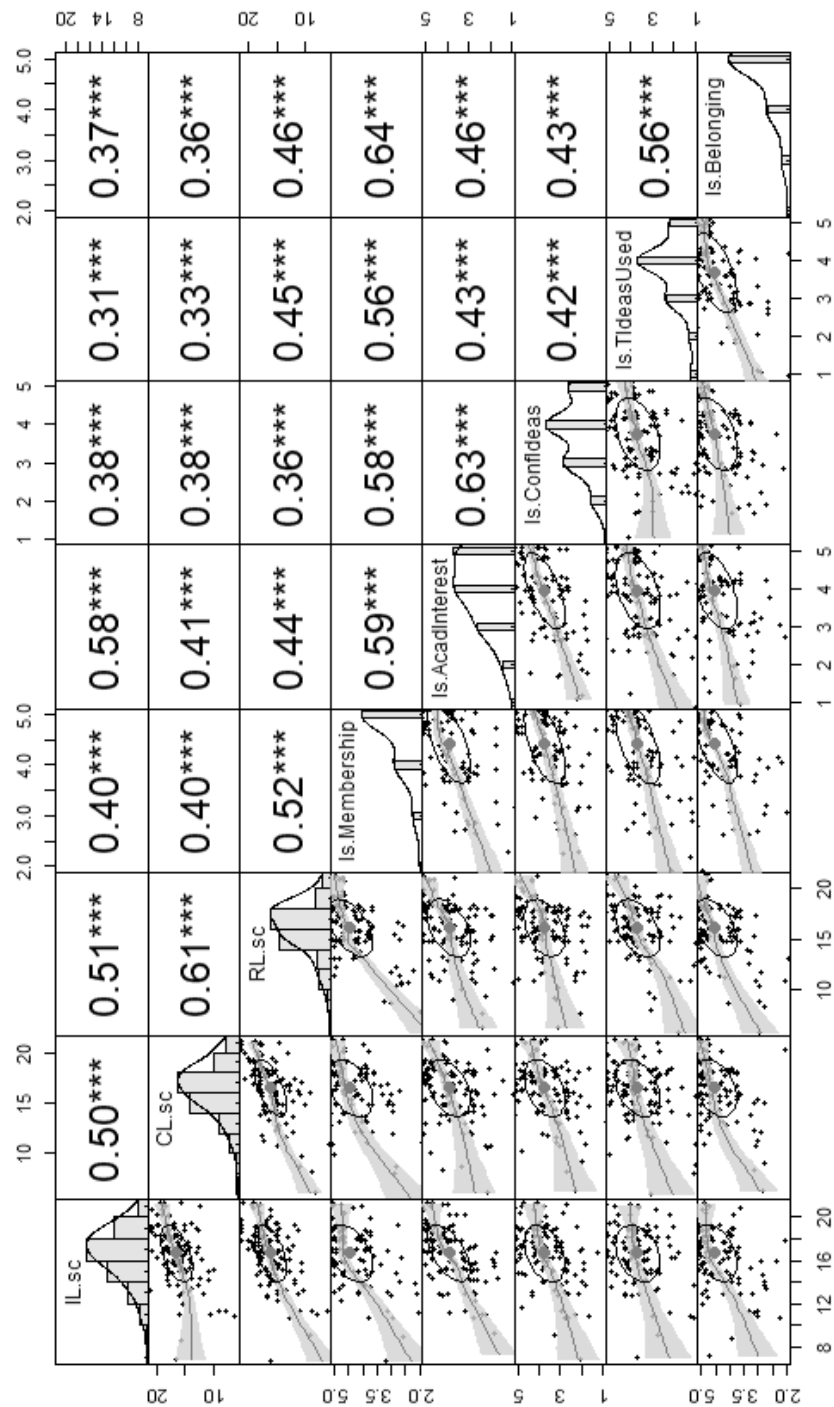
The second most correlated questions were found to be in the Learning Community sets. This suggests that the formation of an appropriate learning community is a key part of the overall course experience and in turn this environment and experience has the major part. Again, for convenience, the results are presented separately for the LCS and LCD.

From examining the LCS correlation matrix, appendix figure 4.27 (343), the following are noted:

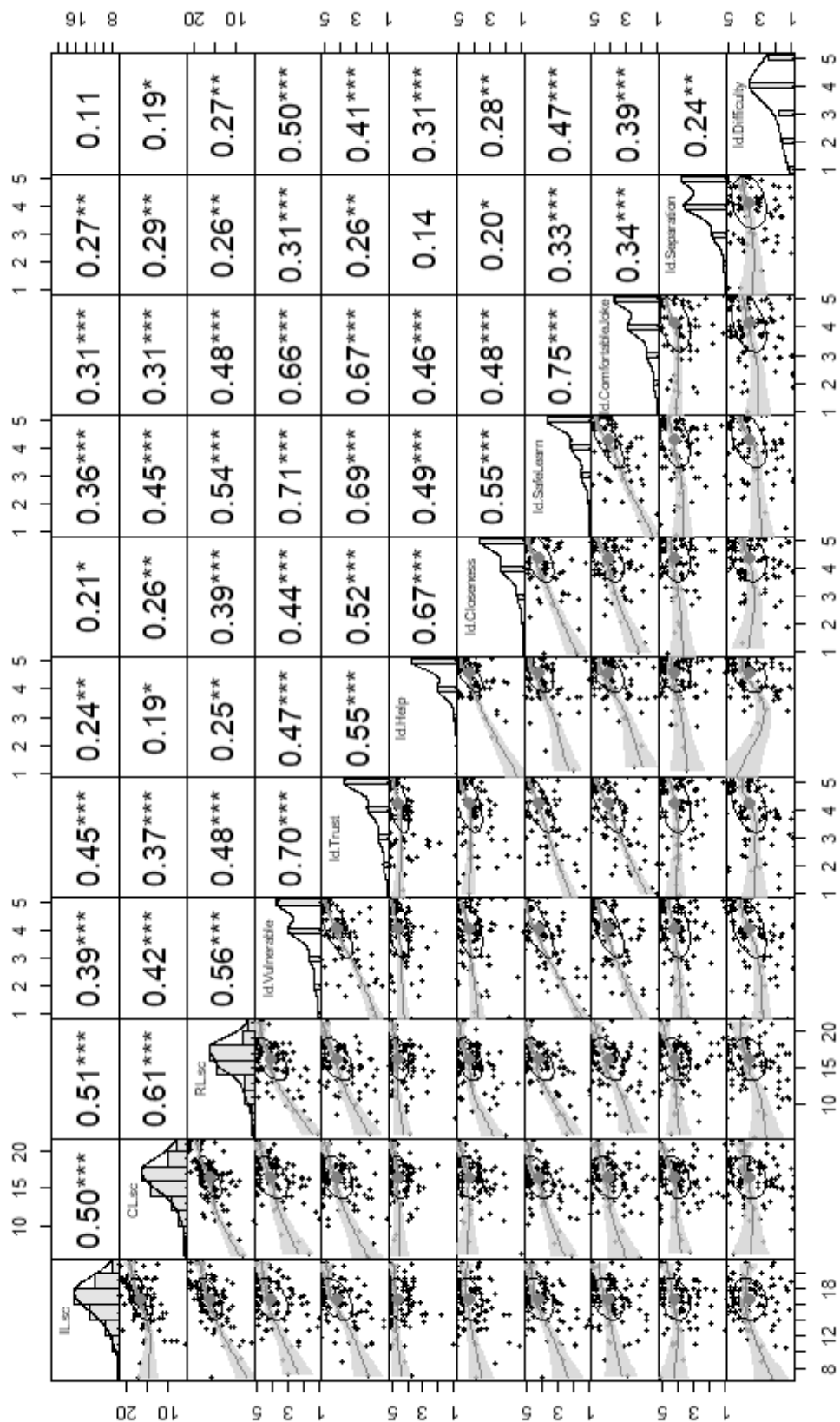
The strongest correlation for the Instrumental Learning (IL) scale is, satisfyingly, with the item which measured the opportunity to pursue Academic Interests and this item also correlated less with the other two scales. Similarly, Membership correlated most highly with the RL score and less with the other two dimensions. Correlations for Ideas-Used and Belonging were also biased towards RL.

In the LCD matrix, appendix figure 4.28 (344), similar biases towards RL were found for other potential markers of power dynamics: Vulnerable, Trust, Safe-Learning, and Comfortable to Joke. Interestingly, some items correlated less strongly with CL than the other two dimensions, namely Trust and Help though the differences may not be strong.

Simple linear models for each of the three dimensions were run. For the IL the model showed that almost 42% of the variance was accounted for by considering the two questions about Academic Interest and Trust. A similar model for CL was not as strong, with only 26% of the variance accounted for with questions about Confidence in sharing ideas and Vulnerable. The strongest model here was for RL with 50% of the variance accounted for by considering Membership, Closeness, Vulnerable, and Help – though the last was a negative effect.



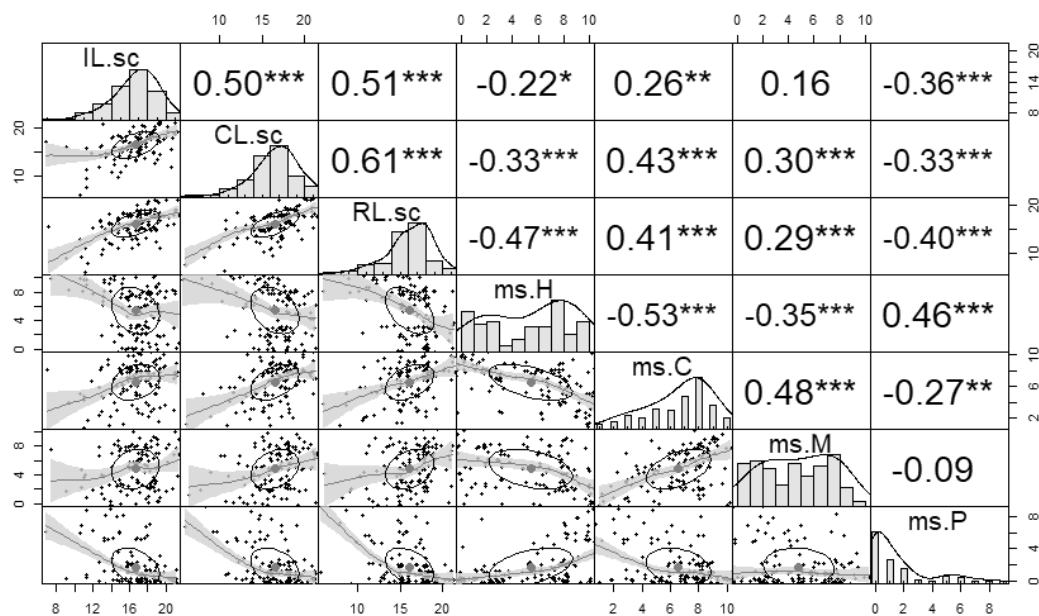
Appendix Figure 4.27. DGL correlations with Learning Community – Shallow (LCS)



Appendix Figure 4.28. DGL correlations with Learning Community – Deep (LCD)

Appendix 4.C.3.e Modes of Relationship

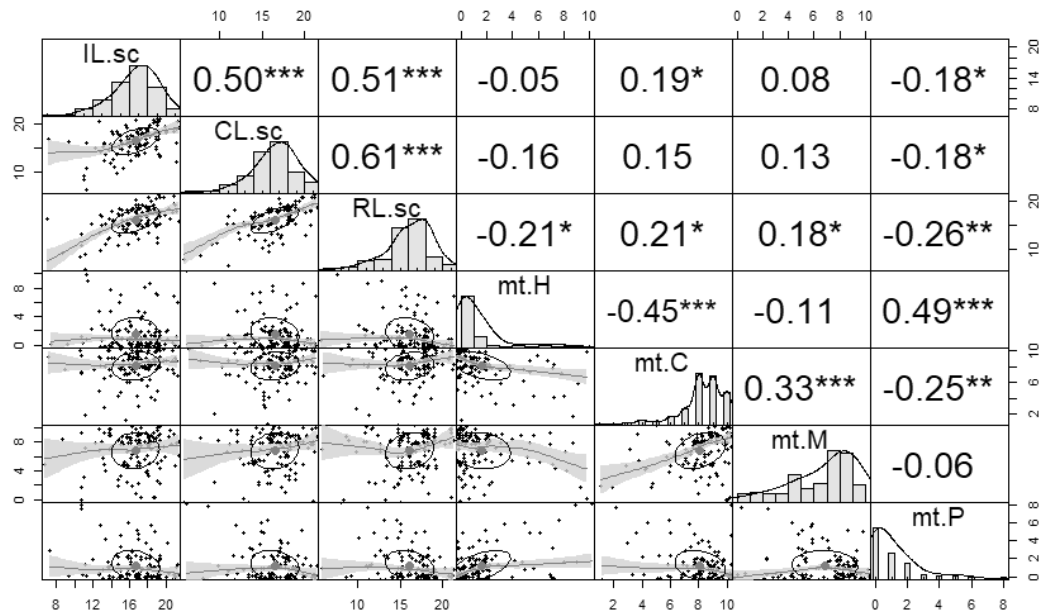
When the modes of relationship are considered in this educational setting, the key polarity that seems to be correlated into this course experience is the extent to which the staff-trainee relationships, appendix figure 4.29 (345), set the tone more towards a kind of hierarchical mode ms.H or towards communal sharing, ms.C. There is also a notably stronger, and negative, correlation between the perception of Hierarchical relationships and RL learning. In this educational setting¹²⁰ it seems to be that when staff-trainee relationships are perceived to be of a hierarchical nature, trainees report lower levels of learning in all areas, though particularly in the Reflective dimension. By contrast, when staff-trainee relationships are perceived to be communal, trainees report higher learning, both in Reflective and Communal dimensions.



Appendix Figure 4.29. DGL correlations with Modes of Relationship with Staff (MORS)

Turning to the correlation matrix dealing with modes of relationship between fellow trainees, appendix figure 4.30 (346), the correlations with learning are notably weaker. This might be largely accounted for by less variation in the responses. The associations with hierarchical and communal relationships are repeated, the former being negative and the latter positive.

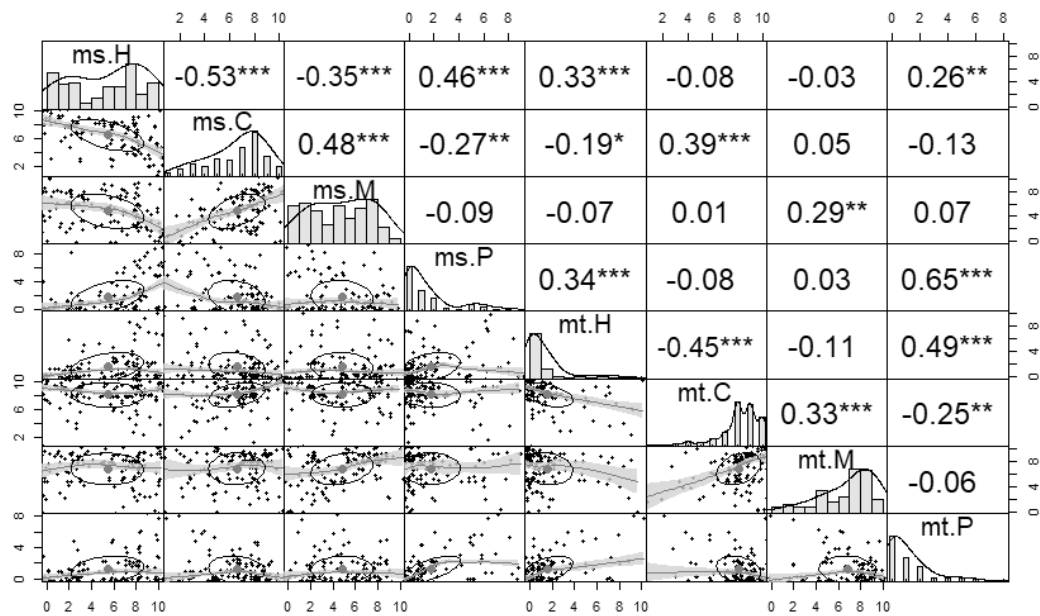
¹²⁰ Trainees in this study may be assumed to be either citizens or permanent residents of Australia and thus their expectations in educational settings are likely to reflect Australian norms. Expectations of other cultural groups could well vary as already discussed 5.A.3, 146ff).



Appendix Figure 4.30. DGL correlations with Modes of Relationship with fellow Trainees (MORT)

A third correlation matrix, appendix figure 4.31 (347), is presented here, linking the modes of relationship between staff and trainees together with those between fellow trainees. In this matrix, there is a pattern of moderate correlations between the staff and trainee sides, particularly for ms.H with mt.H, ms.C with mt.C, ms.M with mt.M and, especially, ms.P with mt.P. Several possible explanations include: some observer effect; general cultural patterns of behaviour; or a real training effect, that at least some trainees are modelling their behaviour on staff. It is also noted here that the data is very non-normal, especially for mt.H, so results are likely to be very unstable.

In each set of four, two pairs of modes appear to be negatively associated with each other, H with P, and C with M.



Appendix Figure 4.31. MORS and MORT correlation matrix

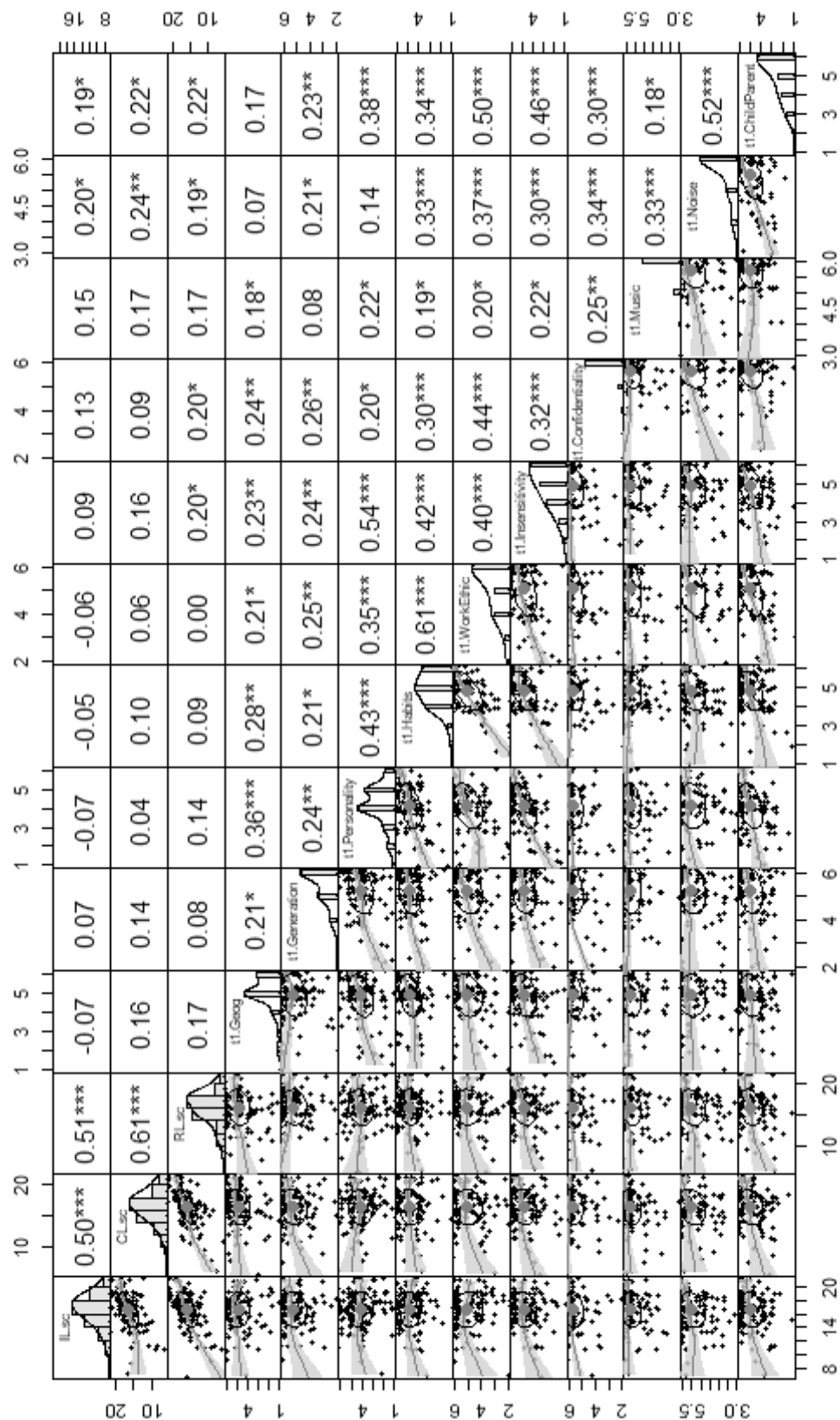
Appendix 4.C.3.f Areas of Tension and Conflict

It was notable that the Tension and Conflict items (tac1) were not strongly correlated, either positively or negatively, with the Areas of Growth and Learning items (agl1). This quantitative evidence is somewhat in opposition to the qualitative evidence which suggested that tension and conflict were both a reality and something which helped trainees learn.

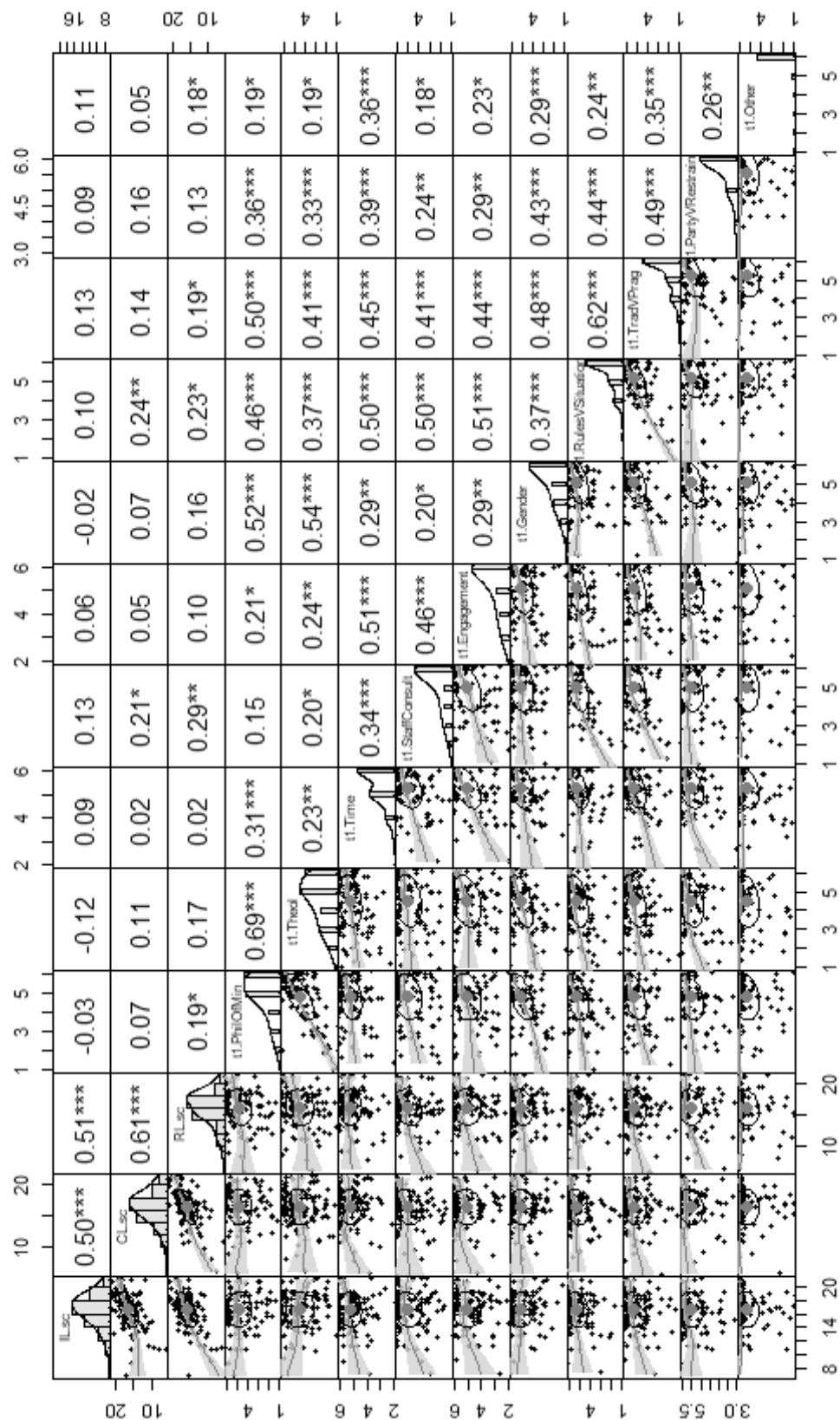
The phase 1 study had suggested that tension and conflict was a significant factor in the course. So the question set Tension and Conflict (TAC1) was examined in more detail. A correlation matrix between Areas of Growth and Learning (AGL1) and areas of Tension and Conflict (TAC1) showed no inter-correlations at a cut-off p-value of 0.001 (admittedly a high bar but which had been used in other analyses as a visual marker of significance). When this was relaxed to 0.05, several correlations became 'significant' and were checked for strength but found to be of very low explanatory value, with the largest correlation coefficients < 0.3 and the highest R^2 value about 0.1 – i.e. only accounting for 10% of variance.

Again, for convenience, the correlation results are presented across two matrices, appendix figure 4.32 (349) and appendix figure 4.33 (350). The first three lines of each, representing the dimensions of growth and learning, reveal very few correlations of significance and no correlation above 0.3.

The pattern of intra-set correlations for TAC1 suggested further investigation of the areas of tension and conflict. Some initial Exploratory Factor Analysis (EFA) was performed and suggested 3-5 clusters. A 3-factor analysis suggested the clusters might be identified around: conflict over interpersonal differences; conflict over ideological differences; and conflict over power differences. This would be an interesting area for further work but could not be explored in the space limitations here.



Appendix Figure 4.32. DGL correlations with Tension and Conflict (TAC1 - part 1)



Appendix Figure 4.33. DGL correlations with Tension and Conflict (TAC1 - part 2)

Appendix 4.C.3.g Beliefs about Tension and Conflict (TAC2)

This material is provided as an expansion on the exploration of Tension and Conflict, 4.C.3.b (154).

For each participant, the score for the area with the most tension and conflict was taken as a measure of the amount of overall tension they perceived. This was then correlated against the various items in the beliefs about tension and conflict (TAC2).

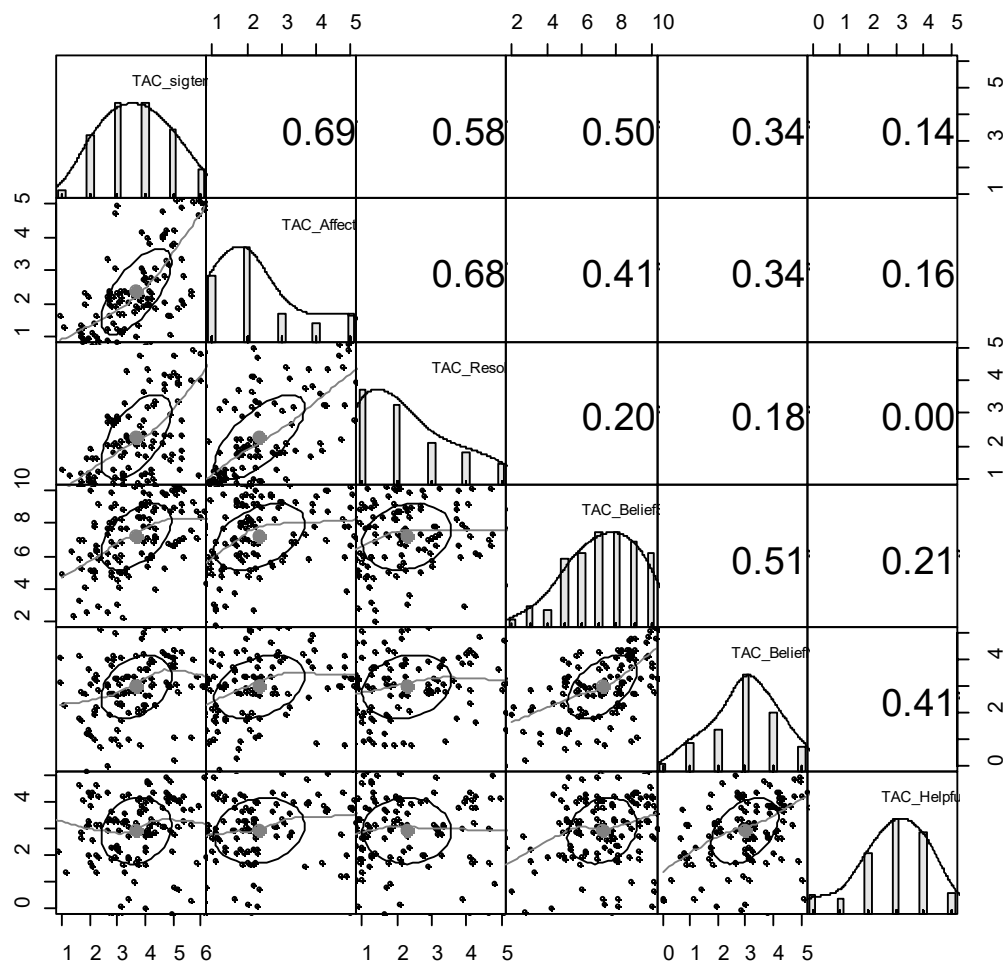
This suggested that people perceive, or perhaps remember, conflict quite differently. Out of 36 cohorts represented, the vast majority (30 cohorts or 83%) had at least 1 person identify at least one area of 'significant tension' and where there were sufficient numbers, it was common to find that responses ranged across 4 levels out of the 6 options within the same cohort. Several possible explanations might be proposed: the most major conflicts might have been kept private; two parties might see the level of conflict differently—and it is noted that such a perceptual difference might be a common feature of conflict in general and indeed might even be an escalating factor; people might have forgotten; or, people might have processed the conflict more or less satisfactorily. Further investigation was not warranted within the scope of this study.

These new scores, worst level of tension and conflict reported (minimum of the 20 areas), were correlated against the various beliefs about conflict (see appendix figure 4.34, 352), as presented in section 4.B.7 (122) above, and linear models were constructed. Where higher levels of tension and conflict were reported this correlated with reports that:

- ☐ Their cohort was more affected by that conflict. ($\beta_1=.69$, $SE=.07$, $\rho=.69^{***}$)¹²¹
- ☐ The conflicts were not resolved as satisfactorily ($\beta_1=.63$, $SE=.07$, $\rho=.58^{***}$)
- ☐ A belief that significant tension and conflict was usually experienced by a higher proportion of cohorts ($\beta_1=.78$, $SE=.13$, $\rho=.50^{***}$)
- ☐ Reported belief that tension and conflict was more necessary ($\beta_1=.28$, $SE=.08$, $\rho=.34^{***}$).
- ☐ There was no significant correlation between the level of tension and conflict reported and how helpful it was as preparation.

Investigation of the idea that there might be an optimal level of tension and conflict showed a small correlation but with negligible explanatory power ($R^2 < 0.05$). Using a LOESS model, one might tentatively suggest that a sweet spot lies in the region where there is Significant Tension up to Moderate Conflict. Overall though, the conclusion seems to be that respondents disagree about the helpfulness of tension and conflict.

¹²¹ (Although not strictly applicable to categorical variables, an estimate of the slope effect size, β_1 , can be obtained from a linear regression model with the assumption that Likert scales with sufficient choices can be treated as numeric. The rank correlation coefficient, Spearman's ρ , is also given. Conventional indicators of p-value significance: *** < .001; ** < .01; * < .05; & . < .1)



Appendix Figure 4.34. Correlation matrix for Worst TAC1 and beliefs about tension and conflict (TAC2)

Appendix Table 4.33. Worst Level of Tension (min(TAC1)) and TAC2, Means, standard deviations, and correlations (spearman) with confidence intervals

Variable	M	SD	1	2	3	4	5
1. sigtenlevel	3.66	1.26					
2. Affect	2.36	1.30	.69*** [.58, .77]				
3. Resolution	2.28	1.28	.58*** [.45, .68]	.68*** [.58, .77]			
4. BeliefSigTen	7.18	2.00	.50*** [.36, .62]	.41*** [.26, .55]	.20* [.02, .36]		
5. BeliefNecessity	2.97	1.20	.34*** [.17, .48]	.34*** [.17, .48]	.18* [.01, .35]	.51*** [.37, .63]	
6. HelpfulPrep	2.93	1.25	.14 [-.04, .30]	.16 [-.01, .33]	.00 [-.18, .18]	.21* [.03, .37]	.41*** [.25, .55]

Note. *M* and *SD* are used to represent mean and standard deviation, respectively. Values in square brackets indicate the 95% confidence interval for each correlation. The confidence interval is a plausible range of population correlations that could have caused the sample correlation (Cumming, 2014). *** indicates $p < .001$, ** $p < .01$, * $p < .05$, . $p < .1$.

Appendix 4.C.4 **Results – Phase 3 - Task 4 – Continued Contact**

These appendices generally relate to section 4.C.4 (155).

Appendix 4.C.4.a Close Friendships

Appendix Table 4.34. Summary of Close Friends amongst Trainees, (non-zero stats). Calculated parameters marked with #.

Variable Name	Var. Code	N	M	SD	SE	Max	Min
Close Friends at Begin	FFT_CFB	32	1.66	0.87	0.15	4	1
Close Friends at End	FFT_CFE	103	6.98	4.53	0.45	24	1
Close Friends Now	FFT_CFN	95	4.69	3.08	0.32	14	1
Close Friends Acquired during course (CFE-CFB)	FFT_CFA [#]	100	6.66	4.42	0.44	24	1
Close Friends Lost after course (CFN-CFE) (loss is -ve, gain +ve)	FFT_CFL [#]	76	-3.59	3.37	0.39	5	-15
<i>Close Friends at End</i> <i>Total Adults</i>	FFT_CFEP [#]	103	0.48	0.26	0.03	1	0.05
<i>Close Friends Now</i> <i>Total Adults</i>	FFT_CFNP [#]	95	0.32	0.2	0.02	0.86	0.03
<i>Close Friends Now</i> <i>Close Friends at End</i>	FFT_CFNOE [#]	92	0.72	0.32	0.03	2.25	0.06
<i>Close Friends Lost</i> <i>Years Elapsed</i>	FFT_CFLPY [#]	76	-0.24	0.21	0.02	0.16	-1

Appendix 4.C.4.b Decay of Close Friendships—Logarithmic Model

The logarithmic model was fitted to the data taking the logarithm of the elapsed time in years.

$$\frac{\text{Close Friends Now}}{\text{Close Friends at End}} = \beta_0 + \beta_1 * \log_{10}(\text{Years Elapsed})$$

For this the parameters were calculated to be:

- ☐ The intercept representing the proportion of close friends retained after 1 year was significant ($\beta_0 = 0.70$, $SE = 0.087$, $p = 8e-12^{***}$).
- ☐ The slope representing the proportion of close friends lost over a logarithmic interval was also significant ($\beta_1 = -0.26$, $SE = 0.119$, $p = 0.031^*$).

Appendix 4.C.4.c Decay of Close Friendships—Power Law Model

A second model using a power law was also prepared:

$$\frac{\text{Close Friends Now}}{\text{Close Friends at End}} = a * \text{Years Elapsed}^k$$

The parameters for this were calculated to be:

- ☐ Parameter a, also representing the proportion of close friends after 1 year was significant ($a = 0.789$, $SE = 0.09$, $p = 9.8e-13^{***}$)
- ☐ Exponent k, representing the rate of decay, also significant ($k = -0.15$, $SE = 0.0634$, $p = 0.022^*$)

Appendix 5 For Discussion (none)

None.

Appendix 6 For Conclusions (none)

None.

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