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Learning Styles and Psychological Preferences among Christian Disciples

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Abstract

This paper offers an audit of the BA in Theology for Discipleship and Ministry by examining the learning styles and psychological preferences of 108 course participants (66% response rate) who completed the Francis Psychological Type Scales and the Francis Inventory of Learning Styles. The data demonstrated that the adult learners displayed strong preferences for introversion over extraversion, for sensing over intuition, and for judging over perceiving, as well as a balance of preferences for thinking and for feeling. In spite of the clear personal preferences of the course participants, appreciation was shown for a mixed learning experience, embracing extravert learning preferences as well as introvert learning preferences, intuitive learning preferences as well as sensing learning preferences, feeling learning preferences as well as thinking learning preferences, and judging learning preferences. Only perceiving learning preferences were not so widely welcomed by the course participants. The implications of these findings were assessed both for educational practice and for further research.

Introduction

A serious and well-designed degree in theology for discipleship and ministry, concerned both with scholarly study and with formation, needs to be firmly rooted both within the rich academic diversity that characterises the field of theology and the rich psychological diversity that characterises the range of human learners. It is for this reason that it is good practice to take learning styles and psychological preferences into account when auditing programmes of this nature.

Learning styles

There is a well-established literature concerned with the definition, evaluation, and critique of learning styles (Jonassen & Grabowski, 1993; Riding & Rayner, 1998; Pritchard, 2005). Within the broader literature concerned with individual differences in teaching and learning, several distinctive models of learning styles were proposed during the 1970s and 1980s, together with instruments developed to assess preferences within these models. For example, the Student Learning Styles Scale developed by Grasha and Riechmann (1975) distinguishes between six aspects of the learners' preferred styles for interacting with teacher and fellow students in a learning environment, defined as participant, avoidant, collaborative, competitive, independent, and dependent. This instrument received critique and application during the 1970s and 1980s (Andrews, 1981; Ferrell, 1983; Grasha, 1984; Riechmann & Grasha, 1974; Sapp, Elliott, & Bounds, 1983). The Gregorc Learning Style Delineator (Gregorc, 1979, 1984) distinguishes between four learning styles defined as concrete sequential, concrete random, abstract sequential, and abstract random. This instrument also received critique and application during the 1980s (Davenport, 1986; Joniak & Isaksen, 1988; Kreuze & Payne, 1989; Lundstrom & Martin, 1986; O'Brien, 1990; Van Voorhees, Wolf, Gruppen, & Stross, 1988; Walton, 1988). The Learning Style Inventory, developed to measure Kolb's (1984) model of learning styles, distinguishes between divergent learners,

assimilative learners, convergent learners, and accommodative learners. This instrument also attracted considerable application and critique from the late 1970s onwards (Certo & Lamb, 1980; Freedman & Stumpf, 1981; Highhouse & Doverspike, 1987; Sales & Carrier, 1987; Atkinson, 1988; Veres, Sims, & Locklear, 1991).

Very little attempt has been made, however, to test such theories specifically within the fields of religious studies and theology. One notable exception was provided by the pioneering study reported by Francis and Fearn (2001) that applied the model of learning styles proposed by Felder and Silverman (1988) in a study conducted among 634 A-level religious studies students. Felder and Silverman's model was designed originally to be particularly relevant to the effective teaching of chemical engineering students and had been subsequently applied to the areas of college science education (Felder, 1993), and to foreign and second language education (Felder & Henriques, 1995). Felder and Silverman's Index of Learning Styles operationalises four dimensions or processes, each conceptualised in terms of two opposing preferences, and defined as perception, input, processing and understanding. On the basis of their study among the A-level religious studies students, Francis and Fearn (2001) proposed some improvement of the Felder and Silverman Index of Learning Styles to produce the Revised Index of Learning Styles.

Although the Revised Index of Learning Styles developed by Francis and Fearn (2001) was clearly useful, it has certain theoretical weaknesses. In essence, the model had been built from observation of how pupils learn, rather than from a more thoroughly developed understanding of human personality. We believed, therefore, that he next step should be to re-think the problem of learning styles in religious education, religious studies and theology, giving proper attention to observation, but locating and interpreting such observation within the context of a coherent and wider theory of personality. There are clear advantages in building learning style theories on already well developed models of

personality. Such models are likely to capture and to profile a fuller range of individual differences likely to affect the ways in which people learn. We chose to work with Carl Jung's model of psychological type (Jung, 1971).

Psychological preferences

Jung's model of psychological type is one of several models of personality well-established in the psychological literature. The theory has been operationalised in several well-known personality tests, including the Myers-Briggs Type Indicator (Myers & McCaulley, 1985), the Keirsey Temperament Sorter (Keirsey & Bates, 1978; Keirsey, 1998) and the Francis Psychological Type Scales (Francis, 2005). There are also clear advantages in applying Jung's model of psychological type to students of theology for discipleship and ministry, since this model has already been applied in a range of theological contexts, including the SIFT method of biblical hermeneutics and liturgical preaching (Francis & Atkins, 2000, 2001, 2002; Francis & Village, 2008).

At its core, Jung's model of psychological type identifies two main mental processes. The first process concerns the ways in which we gather information. This is the *perceiving* process. Some people prefer *sensing* (S); others prefer *intuition* (N). According to the theory, these two types look at the world in very different ways. The second process concerns the ways in which we make decisions. This is the *judging* process. Some people prefer *thinking* (T); others prefer *feeling* (F). According to the theory, these two types come to decisions about the world in very different ways. Jung also suggested that individuals differ in the *orientation* in which they prefer to employ these two processes. Some people prefer the outer or extraverting world (E); others prefer the inner or introverting world (I). According to the theory, these two types are energised in very different ways. Finally, individuals differ in their *attitude* to the outer world. Both introverts and extraverts need to deal with the outer world and both may prefer to do this with a *judging* (J) or a *perceiving* (P) process.

According to the theory, these two types display a very different attitude to the outer world.

In terms of the two orientations, introverts like quiet for concentration. They want to be able to shut off the distractions of the outer world and turn inwards. They can work at one solitary project for a long time without interruption. When they are engaged in a task in the outer world they may become absorbed in the ideas behind that task. Introverts work best alone and may resent distractions and interruptions from other people. Introverts prefer to learn by reading rather than by talking with others. They also prefer to communicate with others in writing, rather than face-to-face. Introverts are oriented to the inner world. They focus on ideas, concepts and inner understanding. They are reflective, may consider deeply before acting, and they probe inwardly for stimulation.

Extraverts like variety and action. They want to be able to shut off the distractions of the inner world and turn outward. They can become impatient with long, slow jobs. When they are working in the company of other people they may become more interested in how others are doing the job than in the job itself. Extraverts like to have other people around them in the working environment, and enjoy the stimulus of sudden interruptions. Extraverts prefer to learn a task by talking it through with other people. They prefer to communicate with other people face-to-face, rather than in writing. They often find that their own ideas become clarified through communicating them with others. Extraverts are oriented to the outer world. They focus on people and things. They are active people, and they scan the outer environment for stimulation.

In terms of the two perceiving functions, individuals who prefer *intuition* develop insight into complexity. They have the ability to see abstract, symbolic and theoretical relationships. They put their reliance on inspiration rather than on past experience. Their interest is in the new and untried. They see quickly beyond the information they have been given or the materials they have to hand to the possibilities and challenges which these offer.

They are often discontent with the way things are and wish to improve them. They become bored quickly and dislike doing the same thing repeatedly. They enjoy learning new skills. Intuitive types follow their inspirations and hunches. They may reach conclusions too quickly and misconstrue the information or get the facts wrong. They dislike taking too much time to secure precision. They prefer to go always for the big picture. They prefer to let the mind inform the eyes.

Individuals who prefer *sensing* develop a keen awareness of present experience. They have acute powers of observation, a good memory for facts and details, the capacity for realism, and the ability to see the world as it is. They rely on experience rather than theory. They put their trust in what is known and in the conventional. Individuals with a preference for sensing are aware of the uniqueness of each individual event. They develop good techniques of observation and they recognise the practical way in which things work now. Sensing types like to develop an established way of doing things and gain enjoyment from exercising skills which they have already learnt. Repetitive work does not bore them. They are able to work steadily with a realistic idea of how long a task will take. Sensing types usually reach their conclusion step by step, observing each piece of information carefully. They prefer to let the eyes tell the mind.

In terms of the two judging functions, individuals who prefer *thinking* develop clear powers of logical analysis. They develop the ability to weigh facts objectively and to predict consequences, both intended and unintended. They develop a stance of impartiality. They are characterised by a sense of fairness and justice. Individuals with a preference for thinking are good at putting things in logical order. Thinking types need to be treated fairly and to see that other people are treated fairly as well. Thinking types are able to anticipate and predict the logical outcomes of other people's choices. They can see the humour rather than the human pain in bad choices and wrong decisions taken by others. Thinking types prefer to look at life

from the outside as a spectator. Sometimes they may appear sceptical.

Individuals who prefer *feeling* develop a personal emphasis on values and standards. They appreciate what matters most to themselves and what matters most to other people. They develop an understanding of people, a wish to affiliate with people and a desire for harmony. They are characterised by their capacity for warmth, and by qualities of empathy and compassion. Individuals with a preference for feeling like harmony and will work hard to bring harmony about between people. They dislike telling other people unpleasant things or reprimanding them. They take into account other people's feelings. Feeling types look at life from the inside. They live life as a committed participant and find it less easy to stand back and form an objective view of what is taking place.

In terms of the two attitudes, *Judging* types schedule projects so that each step gets done on time. They like to get things finished and settled, and to know that the finished product is in place. They work best when they can plan their work in advance and follow that plan. Judging types use lists and agendas to structure their day and plan their actions. Judging types tend to be satisfied once they reach a judgement or have made a decision, both about people and things. They dislike having to revise their decision and take fresh information into account. When individuals take a judging attitude towards the outer world, they are using the preferred *judging process*, thinking or feeling, outwardly. Their attitude to life is characterised by deciding and planning, organising and scheduling, controlling and regulating. Their life is goal-oriented.

Perceiving types adapt well to changing situations. They make allowances for new information and for changes in the situation in which they are living or acting. They may have trouble making decisions, feeling that they have never quite got enough information on which to base their decisions. Perceiving types may start too many projects and consequently have difficulty in finishing them. Perceiving types do not mind leaving things open for last

minute changes. They work best under pressure and get a lot accomplished at the last minute under the constraints of a deadline. When individuals take a perceiving attitude towards the outer world, they are using the preferred *perceiving process*, sensing or intuition, outwardly. They are taking in information, adapting and changing, curious and interested. They adopt an open-minded attitude towards life and resist closure to obtain more data.

Implications for teaching and learning

It is all too easy for the psychological preferences and the learning styles preferences of the teacher to influence the learning environment. Conscious strategies are, therefore, needed to counter unintended bias.

A few concrete examples help to illuminate the kind of issues that distinguished between different learning preferences. The extravert learner thrives in the environment of open classroom debate, but the introvert learner tends to find such methods daunting. Then failure to engage leads to de-motivation and to boredom. On the other hand, the introvert learner thrives in the environment of individual learning and the solitary use of library resources, but the extravert learner tends to find such methods draining. The failure to be energised by solitary study leads to poor understanding and a lack of interest in the subject.

The sensing learner thrives on facts, details and information, while the intuitive learner quickly suffers from information overload. Failure to see how the information leads to the bigger picture leads to fatigue and the desire to switch off. On the other hand, the intuitive learner thrives on theories, hypotheses and possibilities; while the sensing learner tends to become mesmerised by ideas and impatient for the evidence. Failure to see the value of the theories leads to dismissiveness and frustration.

The feeling learner longs for subject matter that engages the human heart and connects with human lives. The feeling learner is attracted by those aspects of the religious education curriculum that deal with the effect of religion on how people live. They are

attracted to themes of peace, harmony and connectedness. On the other hand, the thinking learner longs for subject matter that engages the human head. The thinking learner is attracted by those aspects of religious learning that deal with the beliefs, doctrines and truth claims of the traditions. They are attracted to themes of justice, fairness, truth and logic.

The judging learner needs a well-structured curriculum and a well-planned learning environment. The judging learner needs to know where the sequence of lessons is leading and how the overall plan fits together. The judging learning needs well-planned deadlines and systematic learning strategies. On the other hand, the perceiving learner needs space for flexibility and creativity. The perceiving learner wants to follow ideas where they lead and benefit from open-ended brain-storming sessions. The perceiving learner needs to be trusted to leave things to the last minute and to be rewarded for insightful creativity, even if this is tangential to the main project in hand.

Research aims

Against this background, the present study has two main aims. The first aim is to assess the psychological preferences of the participants in the BA in Theology for Discipleship and Ministry as conceptualised by the Francis Psychological Type Scales (Francis, 2005). The second aim is to assess the learning styles of the participants as conceptualised by the Francis Inventory of Learning Styles.

Method

Sample

A total of 163 questionnaires were posted to the participants engaged in the local education groups facilitated within the BA in Theology for Discipleship and Ministry; 108 were returned, making a response rate of 66%. The respondents comprised 34 men and 74 women; 2 were in their twenties, 19 in their forties, 27 in their fifties, 44 in their sixties, and 16 in their seventies. The majority of participants were Anglicans (91), 10 were Methodists, 2

were Presbyterians, 2 were Roman Catholic, and 1 was Baptist. The majority of the participants were weekly churchgoers (99), and a further 5 attended church at least monthly; 3 attended church occasionally, and 1 never attended church.

Instruments

Psychological type was assessed by the Francis Psychological Type Scales (Francis, 2005). This instrument proposes 40 forced choice items to distinguish between the two orientations (E or I), the two perceiving functions (S or N), the two judging functions (T or F), and the two attitudes toward the outside world (J or P). Extraversion and introversion are distinguished by ten questions like: Are you energised by others (E) or drained by too many people (I)? Sensing and intuition are distinguished by ten questions like: Do you tend to be more concerned for meaning (N) or more concerned about detail (S)? Thinking and feeling are distinguished by ten questions like: Are you warm-hearted (F) or fair-minded (T)? Judging and perceiving are distinguished by ten questions like: Do you tend to be more happy with routine (J) or more unhappy with routine (P)?

Learning preferences were assessed by the Francis Inventory of Learning Styles, in which each of the eight learning styles was assessed by a battery of ten items. Each item was arranged for scoring on a five-point Likert scale: agree strongly, agree, not certain, disagree, and disagree strongly.

Data analysis

The data were analysed by means of the SPSS statistical package, using the reliability and frequency routines.

Results and Discussion

Psychological preferences

The Francis Psychological Type Scales performed with highly satisfactory internal consistency reliability as reflected in the following alpha coefficients (Cronbach, 1951):

extraversion and introversion .87; sensing and intuition .87; feeling and thinking .82; judging

and perceiving .86. All these figures are well in excess of Kline's (1993) threshold criterion

of .70.

The psychological type literature has developed a highly distinctive method for

displaying type data in the format of type tables. Data from the present study are presented in

this way in table 1 in order to facilitate clear comparisons with other studies in the field.

According to these data, the present sample of adult learners show clear preferences

for introversion (66%) over extraversion (34%), clear preferences for sensing (67%) over

intuition (33%), clear preferences for judging (79%) over perceiving (21%), and a balance

between preferences for thinking (49%) and for feeling (51%).

- insert table 1 about here -

It is possible to compare this profile of participants in the BA in Theology for

Discipleship and Ministry with what is known more generally about the psychological type

profile of church congregations both in England (Francis, Duncan, Craig, & Luffman, 2004;

Francis, Robbins, & Craig, 2011) and in Wales (Craig, Francis, Bailey, & Robbins, 2003;

Francis, Robbins, Williams, & Williams, 2007). This group of adult learners shares with adult

churchgoers clear preferences for introversion, for sensing and for judging. On the other

hand, there is a much higher proportion of thinking types found among the adult learners than

among churchgoers in general.

Two further aspects of the data presented in table 1 deserve comment. First, in terms

of Jungian dominant types, dominant sensing far outweighs the other types, with 44% of the

adult learners displaying dominant sensing, compared with 17% dominant intuition, 24%

dominant feeling, and 16% dominant thinking. Programmes servicing dominant sensing types

need to be particularly conscious of the importance attributed by this group of learners to

facts, to details and to information. Dominant sensing types may be lost and alienated by

group facilitators who do not appear to have the information at their finger tips, or who answer requests for factual data by raising more abstract and theoretical speculation.

Second, in terms of temperament, the SJ preference far outweighs other temperaments, with 63% of the adult learners displaying this preference. This is in excess of the population norms of 49% provided by Kendall (1998). Programmes servicing the SJ temperament need to be particularly conscious of the importance attributed by this group of learners to structure and to organisation. SJs provide the backbone to many organisations but may be alienated by group facilitators who appear to be administratively inefficient, unaware of the need for punctuality, or uninterested in schedules and deadlines.

Learning styles

In terms of the *extraverted learning style*, the majority of adult learners enjoyed talking about the course materials with the rest of the group (88%), and enjoyed the stimulus of working with others (94%). The majority found that talking to others helped them to clarify what they thought (82%), and the course helped them to value discussion with other people (81%). The majority enjoyed discussing their personal experiences with others (79%), and always found something to say during the group meetings (72%). Indeed, the majority joined the course in order to talk with others about faith and theology (67%). Two-thirds of the adult learners liked being asked to express their opinion by the facilitator (66%), and three-fifths felt that they wanted more contact with others during the course (57%). On the other hand, a significant minority of the adult learners found it draining having to work alone on assignments (18%).

Although according to their type profile, the adult learners were heavily weighted toward introversion (66%), according to the learning styles inventory the majority of them were also clearly able to appreciate the extraverted aspects of the programme.

In terms of the *introverted learning style*, the majority of adult learners enjoyed

reading the course materials by themselves (84%) and enjoyed opportunities to reflect alone about their personal experiences (81%). Three quarters found that thinking alone about the course materials helped them to clarify what they thought (75%), and enjoyed working on assignments by themselves (77%). Over two-thirds of the adult learners enjoyed working alone to reflect more deeply on their faith (70%), and found that the course helped them to value private contemplation and study (69%). On the other hand, a small minority of the adult learners seemed to find that their deep-seated preference for introversion made aspects of the learning experience difficult for them. Some disliked being asked to express their opinion by the facilitator (9%). Some felt uncomfortable having to talk to others about the course materials (9%). Some found it tiring having to talk with the group (4%), and some found it difficult to speak up during group meetings (7%).

It is clear from these data that the course design and the course delivery enabled a group of adult learners heavily weighted toward introversion to learn in ways appropriate to their own preference. There were sufficient opportunities for introverts to study alone before engaging with group processes. There were, nonetheless, some pressures exerted by the group processes which made the learning experience difficult for introverts.

In terms of the *sensing learning style*, the majority of adult learners enjoyed learning facts about faith and theology (95%), and enjoyed accessing the evidence available about Christian teaching (88%). Three-quarters of the adult learners found that the course helped them to appreciate the importance of careful, detailed study (74%). Three-fifths of the adult learners found that they preferred to work through the course material step-by-step (61%), and enjoyed having to pay attention to significant details for assignments (61%). Half of the adult learners considered that respect for church tradition is important in this kind of course (47%), and appreciated the way the course provided clear information about their faith (52%). Between one-half and one-third of the adult learners found that the course renewed

their respect for the traditions of the church (45%) and felt that the course should involve

more practical applications of faith and theology (34%). On the other hand, a minority of the

adult learners had felt uncomfortable with some of the questions raised by the course (19%).

It is clear from these data that the course design and the course delivery enabled a

group of adult learners heavily weighted toward sensing to learn in ways appropriate to their

own preference. There were plenty of opportunities for sensing types to enjoy facts and

information. There were, nonetheless, some pressures exerted by the intuitive concern with

quest and questioning that made the learning process difficult for sensers.

In terms of the *intuitive learning style*, the majority of adult learners enjoyed

exploring new ideas about Christian teaching (90%), enjoyed the way the course stretched

their imagination (86%), appreciated the way the course raised questions about their faith

(89%), and enjoyed questioning religious tradition during the course (88%). The majority

found that the course encouraged them to explore new ways of thinking (86%) and

discovered that the course helped them to develop new ways of looking at things (85%).

Four-fifths of the adult learners said that they joined the course in order to change and grow

in their faith (82%). Two-thirds of the adult learners valued the course more for raising

questions than for giving answers (70%). On the other hand, one-fifth of the adult learners

were sometimes irritated by the facts they needed to remember (20%), and a smaller number

felt that there was too much detail in the course material (7%).

Although according to their type profile, the adult learners were heavily weighted

toward sensing (68%), according to the learning styles inventory the majority of them were

also clearly able to appreciate the benefits of the intuitive approach to learning.

In terms of the *thinking learning style*, the majority of adult learners enjoyed

stepping back to think objectively about controversial issues (87%), and enjoyed having to

think critically about issues of faith (90%). The majority enjoyed debating difficult issues

(84%), and enjoyed working through difficult issues logically (72%). The majority agreed that group discussion worked best when people held different viewpoints (81%). Two-thirds of the adult learners found that the course helped them to understand God's truth more clearly (70%). Two-thirds said that criticism of their assignments helped them to improve their work (67%). Just under half of the adult learners felt that it was important to say what they thought, even if it upset others in the group (46%). One-third of the adult learners said that they enjoyed challenging others about their faith (32%). On the other hand, a small number of the adult learners felt uncomfortable when people became emotionally involved during the group sessions (11%).

Although according to their type profile, half of the adult learners preferred feeling (51%), according to the learning styles inventory a large proportion of the group were able to appreciate and benefit from ways in which the programme accessed thinking learning preferences.

In terms of the *feeling learning style*, the majority of adult learners enjoyed developing fellowship with others (94%) and found that the course helped them to appreciate how others feel (86%). Three-fifths of the adult learners felt that harmony and fellowship are essential for the course to work well (60%). More than half of the adult learners found that the course helped them to feel God's love more strongly (54%), and wanted to focus more on how theological issues affect people (52%). One-fifth of the adult learners joined the course primarily to develop friendship with other Christians (21%), and thought that group discussion worked best when people agreed with each other (17%). On the other hand, one-third of the adult learners found it difficult to distance themselves from issues that they felt strongly about (35%). One-fifth took criticisms of their work personally (22%), and were worried that people might be upset if they disagreed with them on theological issues (18%).

Although according to their type profile, half of the adult learners preferred thinking

(49%), the learning style inventory makes it clear that a considerable proportion of the group appreciated the benefits of the feeling approach to learning. A significant minority, however, found that their feeling preference made some aspects of learning experience uncomfortable for them.

In terms of the *judging learning style*, the majority of adult learners always tried to be punctual for seminars (88%), and enjoyed their group meeting at the same time on each occasion (81%). Three-quarters of the adult learners worked through the course book in order (71%). Three-fifths liked to keep their notes well-organised (58%). Half of the adult learners planned when they were going to do their work and tried to keep to their plan (51%). Half of the adult learners preferred to work steadily to a deadline (51%). Two-fifths of the adult learners found that the course helped them to organise their ideas effectively (38%). On the other hand, two-fifths of the adult learners found it frustrating when they could not study when they had planned to do so (41%). One-third found it frustrating when people wandered from the point in seminars (33%). A small group of the adult learners found it annoying when seminars ran late (7%).

According to their type profile, the adult learners were heavily weighted toward judging (79%) and the learning style inventory makes it clear that the majority of adult learners appreciated a well-structured learning environment. Moreover, a significant number of adult learners experienced levels of frustration when their judging learning preferences were not fully realised.

In terms of the *perceiving learning style*, over two-fifths of the adult learners found that the course helped them to experiment with new ways of working (44%), found it difficult to meet deadlines (46%), and said that they usually studied whenever they felt like it (44%). Under one-third of the adult learners liked to be flexible in seminars and not tied always to time and order (29%), and would have preferred the course books to have been

more flexible (30%). Over one-quarter of the adult learners were sometimes late for seminars when things cropped up at the last minute (30%). Under one-fifth of the adult learners dipped into the course book depending on what took their interest (18%), and preferred to work on their assignments at the last minute (19%). Only a small number of the adult learners would have liked more variety in the course (15%), or found it frustrating having to attend meetings at the same time on each occasion (7%).

According to their type profile, only a minority of adult learners preferred perceiving (21%) and the learning style inventory makes it clear that the perceiving learning style is not strongly endorsed by the adult learners.

Conclusion

The present study was guided by two main research aims. The first was to provide a psychological type profile of the participants in the BA in Theology for Discipleship and Ministry. A response rate of 66% among the course participants has generated a reliable profile using the Francis Psychological Type Scales (Francis, 2005). According to this profile, the cohort of adult learners showed strong preferences for introversion over extraversion, for sensing over intuition, and for judging over perceiving; the cohort also showed a balance in terms of preferences for thinking and for feeling. Two main conclusions may be deduced from this profile. First, it is clear that the adult learners mirror the psychological type profile of the congregations from which they drawn in terms of three characteristics, namely preferences for introversion, sensing and judging. On the other hand, church congregations as a whole contain a much lower proportion of thinking types than is found among these adult learners. This suggests that the programme is failing to attract its fair share of feeling types from the local congregations. If adult theological education of this nature is to be equally available to all churchgoers, there may be a need to reconsider ways in which the programme is marketed in order to appeal more strongly to feeling types.

Second, the programme needs to recognise the significant presence of introverts, sensing types and judging types among the adult learners. On the one hand, the programme needs to meet the needs of this core constituency. On the other hand, the programme needs to ensure that the strong presence of introvert, sensing type and judging type participants does not eclipse the somewhat different expectations and needs of extraverts, intuitive types and perceiving types.

The second aim was to establish the extent to which the eight different learning styles were appreciated by the adult learners. According to the responses to the Francis Inventory of Learning Styles, it is clear that seven of the eight learning styles made a useful contribution to the overall learning experiences of the course participants, with only the exception of the perceiving learning style. This finding is important for two reasons. First, it demonstrates that it would be simplistic to assume that adult learners only appreciate and benefit from the learning styles which reflect their own psychological preferences. Although this particular group of adult learners was heavily weighted toward introversion, sensing and judging, there is good evidence that the extraverted learning style and the intuitive learning style were well appreciated, although the perceiving learning style was less well affirmed. Introverts clearly valued the Local Education Groups as a vehicle for enabling them to appreciate extraverted features of the learning environment. Sensing types clearly valued the challenges of the educational experience to embrace intuitive perspectives.

Second, this finding also highlighted the way in which the exercise of the full range of learning styles will inevitably cause predicted expressions of discontent or distress among a minority of participants. Extraverts found it draining to work on assignments alone (a feature of the introverted learning style). Introverts disliked being asked to express their opinion by the facilitator (a feature of the extraverted learning style). Sensing types felt uncomfortable with some of the questions raised by the course (a feature of the intuitive learning style).

Intuitives sometimes felt irritated by the facts they needed to remember (a feature of the sensing learning style). Thinking types felt uncomfortable when people became emotionally involved during group sessions (a feature of the feeling learning style). Feeling types sometimes took criticisms of their work personally (a feature of the thinking learning style). Judging types found it frustrating when people seemed to wander from the point in seminars (a feature of the perceiving learning style). Perceiving types found it difficult to meet deadlines (a feature of great importance to the judging learning style).

Overall, this study has demonstrated the value of investing further energy within this underdeveloped field of research which has considerable practical implications for teaching and learning in the field of theology for discipleship and ministry.

References

Andrews, J. (1981). Teaching format and student style: Their interactive effects on learning. *Research in Higher Education, 14*, 161-178.

Atkinson, G. (1988). Reliability of the LSI. *Psychological Reports, 62,* 755-758.

Certo, S.C. & Lamb, S.W. (1980). An investigation of bias within the Learning Styles Inventory through factor analysis. *Journal of Experiential Learning and Simulation, 2*, 1-7.

Craig, C.L., Francis, L.J., Bailey, J., & Robbins, M. (2003). Psychological types in Church in Wales congregations. *The Psychologist in Wales, 15*, 18-21.

Cronbach, L.J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*, 297-334.

Davenport, J.A. (1986). Learning style and its relationship to gender and age among Elderhostel participants. *Educational Gerontology, 12*, 205-217.

Felder, R.M. (1993). Reaching the second tier in learning and teaching styles in college science education. *Journal of College Science Teaching, 23*, 286-290.

Felder, R.M. & Henriques, E.R. (1995). Learning and teaching styles in foreign and second language education. *Foreign Language Annals, 28*, 21-31.

Felder, R.M. & Silverman, L. (1988). Learning and teaching styles in engineering education. *Engineering Education, 78*, 674-681.

Ferrell, B.G. (1983). A factor-analytic comparison of four learning styles instruments. *Journal of Educational Psychology, 78*, 33-39.

Francis, L.J. (2005). *Faith and psychology: Personality, religion and the individual*. London: Darton, Longman and Todd.

Francis, L.J. & Atkins, P. (2000). *Exploring Luke's Gospel: A guide to the Gospel readings in the Revised Common Lectionary*. London: Mowbray.

Francis, L.J. & Atkins, P. (2001). *Exploring Matthew's Gospel: A guide to the Gospel readings in the Revised Common Lectionary*. London: Mowbray.

Francis, L.J. & Atkins, P. (2002). *Exploring Mark's Gospel: An aid for readers and preachers using year B of the Revised Common Lectionary*. London: Continuum.

Francis, L.J., Duncan, B., Craig, C.L., & Luffman, G. (2004). Type patterns among Anglican congregations in England. *Journal of Adult Theological Education, 1*, 66-77.

Francis, L.J. & Fearn, M. (2001). Assessing and interpreting learning performances among A-level religious studies students: The Revised Index of Learning Styles. *British Journal of Religious Education, 24*, 41-57.

Francis, L.J., Robbins, M., & Craig, C.L. (2011). The psychological type profile of Anglican churchgoers in England: Compatible or incompatible with their clergy? *International Journal of Practical Theology, 15*, 243-259.

Francis, L.J., Robbins, M., Williams, A., & Williams, R. (2007). All types are called, but some are more likely to respond: The psychological profile of rural Anglican churchgoers in Wales. *Rural Theology, 5*, 23-30.

Francis, L.J. & Village, A. (2008). *Preaching with all our souls*. London: Continuum.

Freedman, R.D. & Stumpf, S. A. (1981). Learning style inventory: Still less than meets the eye. *Academy of Management Review, 6*, 297-299.

Grasha, A.F. (1984). Learning styles: The journey from Greenwich Observatory (1796) to Dalhousie University (1984): An analysis and synthesis. *Improving College and University teaching Journal, 32*, 46-53.

Grasha, A.F. & Riechmann, S. W. (1975). *Student Learning Styles Questionnaire*. Cincinnati, Ohio, University of Cincinnati Faculty Resource Centre.

Gregorc, A.F. (1979). Learning/teaching styles: Potent forces behind them. *Educational Leadership, 36*, 234-236.

Gregorc, A.F. (1984). Style as a symptom: A phenomenological perspective. *Theory into Practice, 23*, 51-55.

Highhouse, S. & Doverspike, D. (1987). The validity of the Learning Style Inventory 1985 as a predictor of cognitive style and occupational preference. *Educational and Psychological Measurement, 47*, 749-753.

Jonassen, D.H. & Grabowski, B. L. (1993). *Handbook of individual differences, learning and instruction*. Hillside, New Jersey: Lawrence Erlbaum.

Joniak, A.J. & Isaksen, S.G. (1988). The Gregorc Style Delineator: Internal consistency and its relationship to Kirton's adaptive-innovative distinction. *Educational and Psychological Measurement, 48*, 1043-1049.

Jung, C.G. (1971). *Psychological types: The collected works, volume 6*. London: Routledge and Kegan Paul.

Keirsey, D. (1998). *Please understand me: 2*. Del Mar, California: Prometheus Nemesis.

Keirsey, D. & Bates, M. (1978). *Please understand me*. Del Mar, California: Prometheus Nemesis.

Kendall, E. (1998). *Myers-Briggs Type Indicator: Step 1 manual supplement*. Palo Alto, California: Consulting Psychologists Press.

Kline, P. (1993). *The handbook of psychological testing*. London: Routledge.

Kolb, D.A. (1984). *Experiential learning: Experience as a source of learning and development*. Englewood Cliffs, New Jersey: Prentice-Hall.

Kreuze, J.G. & Payne, D.D. (1989). The learning style preferences of Hispanic and Anglo college students: A comparison. *Reading Improvement, 26*, 166-169.

Lundstrom, K.V. & Martin, R.E. (1986). Matching college instruction to student learning style. *College Student Journal, 20*, 270-274.

Myers, I.B. & McCaulley, M.H. (1985). *Manual: A guide to the development and use of the Myers-Briggs Type Indicator*. Palo Alto, California: Consulting Psychologists Press.

O'Brien, T.P. (1990). Construct validation of the Gregorc Style Delineator: An application of LISTREL 7. *Educational and Psychological Measurement, 50*, 631-636.

Pritchard, A. (2005). *Ways of learning: Learning theories and learning styles in the classroom*. London, David Fulton.

Reichmann, S.W. & Grasha, A.F. (1974). A rational approach to developing and assessing the validity of a student learning styles instrument. *Journal of Psychology, 87,* 213-223.

Riding, R. & Rayner, S. (1998). *Cognitive styles and learning strategies: Understanding style differences in learning and behaviour*. London: David Fulton.

Sales, G.C. & Carrier, C.A. (1987). The effect of learning style and the type of feedback on achievement in a computer-based lesson. *International Journal of Instructional Media, 14*, 171-185.

Sapp, G.L., Elliott, G.R., & Bounds, S. (1983). Dealing with diversity among college students. *Journal of Humanistic Education and Development, 22*, 80-85.

Van Voorhees, C., Wolf, F.M., Gruppen, L. D., & Stross, J.K. (1988). Learning styles and continuing medical education. *Journal of Continuing Education in the Health Professions, 8*, 257-265.

Veres, J.C., Sims, R.R., & Locklear, T.S. (1991). Improving the reliability of Kolb's revised Learning Style Inventory. *Educational and Psychological Measurement, 51*, 143-150.

Walton, W.T. (1988). The effects of personality types and communication/behaviour styles of single parent mothers on their male children. *International Journal for the Advancement of Counselling, 11*, 283-291.

Table 1

Type Distribution for Adult Learners in Christian Theology

The Sixteen Complete Types				Dichotomous Preferences		
ISTJ *n* = 29 (26.9%) +++++ +++++ +++++ +++++ +++++ ++	**ISFJ** *n* = 16 (14.8%) +++++ +++++ +++++	**INFJ** *n* = 6 (5.6%) +++++ +	**INTJ** *n* = 6 (5.6%) +++++ +	E I	*n* = 37 *n* = 71	(34.3%) (65.7%)
				S N	*n* = 72 *n* = 36	(66.7%) (33.3%)
				T F	*n* = 53 *n* = 55	(49.1%) (50.9%)
				J P	*n* = 85 *n* = 23	(78.7%) (21.3%)
ISTP *n* = 1 (0.9%) +	**ISFP** *n* = 0 (0.0%)	**INFP** *n* = 10 (9.3%) +++++ ++++	**INTP** *n* = 3 (2.8%) +++	**Pairs and Temperaments**		
				IJ IP EP EJ	*n* = 57 *n* = 14 *n* = 9 *n* = 28	(52.8%) (13.0%) (8.3%) (25.9%)
				ST SF NF NT	*n* = 41 *n* = 31 *n* = 24 *n* = 12	(38.0%) (28.7%) (22.2%) (11.1%)
ESTP *n* = 0 (0.0%)	**ESFP** *n* = 3 (2.8%) +++	**ENFP** *n* = 4 (3.7%) ++++	**ENTP** *n* = 2 (1.9%) ++	SJ SP NP NJ	*n* = 68 *n* = 4 *n* = 19 *n* = 7	(63.0%) (3.7%) (17.6%) (15.7%)
				TJ TP FP FJ	*n* = 47 *n* = 6 *n* = 17 *n* = 38	(43.5%) (5.6%) (15.7%) (35.2%)
ESTJ *n* = 11 (10.2%) +++++ +++++ +	**ESFJ** *n* = 12 (11.1%) +++++ +++++ +	**ENFJ** *n* = 4 (3.7%) ++++	**ENTJ** *n* = 1 (0.9%) +	IN EN IS ES	*n* = 25 *n* = 11 *n* = 46 *n* = 26	(23.1%) (10.2%) (42.6%) (24.1%)
				ET EF IF IT	*n* = 14 *n* = 23 *n* = 32 *n* = 39	(13.0%) (21.3%) (29.6%) (36.1%)

Jungian Types (E)			**Jungian Types (I)**			**Dominant Types**		
	n	%		*n*	%		*n*	%
E-TJ	12	11.1	I-TP	4	3.7	Dt. T	16	14.8
E-FJ	16	14.8	I-FP	10	9.3	Dt. F	26	24.1
ES-P	3	2.8	IS-J	45	41.7	Dt. S	48	44.4
EN-P	6	5.6	IN-J	12	11.1	Dt. N	18	16.7

N = 108   + = 1% of *N*

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