

Do tertiary institutions' goals change? A Delphi follow-up study

Wilf Rieger

Avondale University, Cooranbong, NSW

wilf.rieger@avondale.edu.au

Keywords: Goals, values, Delphi study, tertiary education, planning, developing country

Abstract

This research investigated the 'use-by-date' of Delphi study outcomes—an area overlooked in Delphi literature. The findings signposted the continuing relevance and importance of high priority goals (HPGs) formulated for an educational institution more than two decades ago. Excellence and service featured as foremost values, among others, embedded in or associated with HPGs. The results of the study point to the long-term durability of value-laden goals in Delphi studies; particularly as goals relate to a prevailing worldview.

Introduction and background

In the 1980s a Delphi study was conducted in view of the decision by the Seventh-day Adventist (SDA) Church to establish a new tertiary institution in Papua New Guinea (PNG). Historic, educational, and demographic reasons contributed to the SDA Church having taken such a course, including the positive comments of anthropologists (Groves, 1934a, b), politicians (Somare, 1976) and educators (Hunter, 1976) regarding the Church's longstanding contributions to PNG education. The 56-member diverse, representative, participating Delphi group identified 66 goals (including those ranked as high priority goals) that should guide the establishment and operation of the faith-based, post-secondary institution (Rieger, 1984); which was ultimately set up.

Goals: importance and challenges

Establishing a tertiary institution from 'scratch' is a formidable undertaking. As part of the initial planning process, the seminal importance of setting goals has long been recognised (Platt, 1970; Barney & Griffin, 1992; Quain, 2018). Goals are outcomes or states for which a plan or design is made. Reasons for their significance that have been posited include that they provide focus, direction, a source of legitimacy to members, clues about the nature and

character of the organisation, and a standard for performance (Kashyap, 2018). Also of note, is that goals help to determine priorities (Haynes, 2019). Furthermore, it should be understood that goals are value laden. They "... are primarily commitments to certain values, norms and ideologies" (Hasenfeld & English, 1977, p. 9); and by extension, they reflect and comprise worldviews. Values are fundamental beliefs, principles and motives that signify priorities and guide actions (McNiff, 2013); integrally, they describe the desired culture and connect with the mission of the institution (Kenny, 2014).

The connection between goals and values is elucidated by Creative Business Inc. (2018):

Goal setting processes should always remain aligned with your company's [institution's] core philosophy and values ... Core values are the essential and enduring principles that define what your company [institution] stands for. They are the bedrocks upon which your entire company [institution] runs.... Think of your Core Vision and Values as a compass [They] should always be there. (p. 1, emphasis supplied)

It is thus evident that the formulation of goals becomes a necessary and essential step for planners in the establishment of an educational institution.

However, goal setting is not a straight-forward endeavour. The Achilles' heel of goal statements is that they are often, "little more than idealistic rhetoric" Patterson (2001), as perceived in relation to tertiary education institutions. Juxtaposed, some goal strategies (often those adopted from business management and the public admin. sector) emphasise measurability, specificity, attainability, monitoring and evaluation, and the allocation of time and monetary resources (van der Hoek et al. 2018; Chowdhury, 2017; Copeland, n.d.). In the latter case, stating *qualitative goals* to achieve *quantitative objectives* is likely to become problematic (if not a paradox). Goal setting thus becomes an endeavour that requires perceptiveness, prudence and pragmatism, keeping in mind *foremost* the overall institutional purpose, values and culture, and balancing these with quantitative outcomes.

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Purpose of the present follow-up study

Despite an organisation or institution espousing a particular vision and certain values, with the passage of time, goal displacement and goal distortion may occur. In both cases the official goals and values of the organisation have been supplanted; in the former case by the interests of influential individuals or groups, while in the latter the organisation's activities have become centred around or governed by operations and procedures.

Alternatively, existing goals may have 'decayed', been achieved, or become irrelevant, as argued by Kashyap (2018):

Goals are framed by people in a particular environmental setting.... goals are formulated in the midst of environment—economic, technological, social, and political—which is bound to undergo a change in the passage of time. Consequently, the goals formulated in the earlier environmental setting may prove irrelevant in the new setting. (p. 3)

Given the tertiary institution has been functioning for some decades, there is therefore justification for revisiting organisational and institutional goals, as this study sought to do.

The present follow-up Delphi study posed the following research questions about goal importance, longevity, and attainment/achievement, to guide the investigation (in light of the institutional goal statements originally formulated more than two decades earlier):

1. Which high priority goals (HPGs) *retained/lost* their ranking?
2. Which goals (if any) newly gained high priority ranking status?
3. What are the likely implications of the ranking stability/changes of the above goals?
4. At what *levels of agreement* were the above goals rated?
5. Is there a significant gap between the rating and achievement of HPGs and what are some possible implications?

Findings in relation to these posited questions should not only contribute to the Delphi literature knowledge base but, equally important, be helpful to current administrators and faculty of the institution.

In the follow-up study it was assumed, as in the original, that participants are able to make valid judgements, observe independence of responses and that personality differences have no significant effect on outcomes. A limitation of the follow-up study is that the Delphi panel may lack some of the diversity of the original study's panel, while a *delimitation* of the follow-up study is that it focuses on high priority goals only.

Review of Delphi literature

Following declassification by the U.S. Airforce in the early 1960s (Dalkey & Helmer, 1962), the futures-oriented exercise, dubbed "Delphi" after the ancient Greek oracle, went through several developmental growth stages — obscurity, novelty, popularity, scrutiny and continuity over a period of 20 years (Rieger, 1986). After use in many hundreds of dissertations and thousands of applications across education, business, industry, nursing, law, among others—as data bases can attest—the use and acceptance of the methodology suggests it has veritably reached the stage of *orthodoxy*.

Linstone and Turoff (2002, p. 3), the doyens of Delphi literature, assert: "Delphi may be described as a method for structuring a group communication process so that the process is effective in allowing a group of individuals, as a whole, to deal with a complex problem". Linstone (1978) had earlier pointed to the suitability of the method in investigations where,

1. The problem does not lend itself to precise analytical techniques but can benefit from subjective judgements on a collective basis,
2. Individuals who need to interact cannot be brought together in a face-to-face exchange because of time or cost constraints (p. 275).

The overall aim of a Delphi panel is to reach *the most reliable agreement* on a specified issue or problem regarding which they have expertise, knowledge, or experience. Participants are asked to respond (usually on a Likert scale) to statements in a(n) e/mailed questionnaire format over several rounds, and are provided with controlled feedback, until a stable level of agreement is determined statistically. Anonymity, a feature of the process, negates the risk posed by group-think and the possible influence of powerful individuals (von der Gracht, 2012). Delphi is also open to the possibility of procedural adaptation, depending on the research context (Hirschborn, 2019).

Within the available Delphi literature relatively few studies have researched aspects of the technique itself and there has been an almost complete absence in the literature of examples of long-term follow-up studies, where Delphi functioned as a preference probe. An example of an exception is Kruus' (1983) study that compared the long-term aims of a Delphi process, to actual developments in the decade that followed. Filling in a conspicuous gap in the literature thus provides added justification for the present study.

Hinton's (2012) comments on the merit of a Delphi study outcome delivering input for integrated planning, provides an apposite 'wrap-up' on the

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above precis of relevant Delphi literature:

[The input from a Delphi study facilitates] the linking of vision, principles, people, and the physical institution in a flexible system of evaluation, decision-making and action. It shapes and guides the entire organization as it evolves over time within the community. (p. 3)

Methodology

The *original* Delphi study (O) followed accepted Delphi conventions and principles. It included, for example, a representative 56-member panel; questionnaire design, construction, and piloting procedures; design of rounds; and the use of appropriate statistical treatments (Rieger, 1985).

In the *follow-up* study (FU), 50 members comprised the Delphi panel. It was characterised by a balance of gender, staff/faculty/student ratio, country of origin, and a spread of educational completion levels ranging from under-graduate to doctorate. The questionnaire instrument from the original Delphi study was being utilised and it was sent to, and returned by participants; additionally, participants had space to rate perceived goal achievement. Individual ratings for each goal statement were aggregated and the statistical group mean response calculated, giving rise to a goal rank. Focus on the latter is decisive in comparing the original with the follow-up Delphi study, because actual goal rating score means may not be valid *comparative* indicators of importance. Also, agreement levels for goals were calculated according to Dajani et al. (1979) and compared; 22 goals (one third) were designated to be high priority goals, comparable to the original study.

Results and discussion

Data collection was enabled by a useful return rate of almost 80%. Multiple Delphi rounds were not required in the follow-up study given the very high levels of agreement on goal importance (to a somewhat lesser degree on goal achievement).

A comparison

The institutional goal rating mean scores (IGRMS)—on a six-point Likert scale of importance, e.g., 1 = extreme, 3 = moderate, 6 = reject—of the original study's participant group were 'higher' than those in the follow-up study, for 60 individual goals; a lower IGRMS equating to a *greater* importance. The attribution of greater importance to goals, overall, in the follow-up study was evident on two counts. First, goal 7.13 (Curriculum—Teaching) had a goal ranking of 7, in *both* studies, with a IGRMS of 1.60 in the original study, but a IGRMS of 1.36 in the follow-up study. Second, the IGRMS of *all* 66 goals was lower in the follow-up study ($M_O = 2.101$, $SD_O = 0.465$ and $M_{FU} = 1.806$, $SD_{FU} = 0.384$) indicating an overall

greater, but less dispersed, importance attached to goals investigated. Furthermore, a need for cautious interpretation of the difference in the groups' mean rating scores is highlighted, for example, by the data for goal 12.2 (To promote a non-elitist spirit). It was given an identical IGRMS of 1.86 by both groups but had a goal ranking differential (GRD) of 24 in the follow-up study, with its participants ranking it as less important, at 44, dropping from a rank of 20 (see Table C). It is evident that the rank order of goals is a critical indicator in comparing the importance of goals in the two studies.

Statistical analysis indicated homogeneity of variance between the two groups, $F(1,130) = 1.442$, $p > 0.01$, supporting an independent groups t-test (equal size and variance) with output statistics, $t(130) = 3.943$, $p < 0.01$, (Runyan & Haber, 1977) that on interpretation assert M_O is statistically, significantly greater than M_{FU} .

Accordingly, which goals were affected by any changes of perceived importance?

High priority goal ranking retained

To begin, which institutional goal statements (IGS) in the original Delphi study retained their high priority ranking (HPR) in the follow-up study? Also, what values are embedded in these IGS? Table A provides relevant information for appropriate analysis and discussion. In proceeding, it seems an advantageous strategy to cluster the proposed values inherent in or associated with the various goals rather than dealing with them individually and separately in their distinct goal categories. As a result, a kind of values 'mosaic' emerges from the goals that have been 'carried over' from an original HPG list. A perusal of, and reflection on the data shown by Table A suggests a discussion (that follows) of the values inherent in or associated with goals.

Excellence

Participants in both studies considered it requisite that educational institutions demonstrate excellence as an underlying value. In the follow-up study, participants re-endorsed the importance of excellence, with some items at a higher ranked priority. Excellence—the notion of quality—is valued not only as an end in itself, as it relates particularly to academic matters (goal 11.1, GRD = +15; a *positive* value indicating an *upgrading* in ranking), but its significance and pervasiveness stretches across a number of goal categories and institutional endeavours. An example is the perceived quality of staff employed—their professionalism, competence, expertise, (goals 6.1, GRD = -3; a *negative* value indicating a *downgrading* in ranking), and commitment (goal 6.2, GRD = -5), and how the institution is perceived by the wider

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community and in the region (goals 11.2, GRD = +6; 11.3, GRD= +2).

A minor change in goal ranking order either way (because of close clustering of goal mean rating scores) should not necessarily be interpreted as a noteworthy change in importance. What is noteworthy is any major disparity between perceived *goal importance* and perceived *goal achievement*, as indicated by the respective (F-U) mean rating scores. A case in point is goal 6.1, relating to staff qualifications and experience, which impacts excellence. Perceived achievement was *below* perceived importance by a difference of 1.37 in rating mean scores! More will be said about achievement (or lack thereof) under the heading, Expectation and Performance.

At the institutional level, excellence should extend to and be at the forefront of renewal, educational innovation, research and knowledge advancement, scholarship, and taking advantage of opportunities. This might be facilitated by connecting with organisations beyond PNG, such as the Higher Education Private Provider Quality Network—HEPP-QN (Fernandez, et al., 2019).

In participants' perceptions, excellence not only contributes towards community and regional respect and recognition, in relation to the institution's reputation and public image, but also augments recognition of graduates' qualifications, and by extension increases their job opportunities. With the latter in mind, follow-up study participants perhaps judged that the institution should focus on offering courses at the *degree* level only; this was identified as a new HPG, with diploma and certificate study awards being ranked only as 63 and 66 respectively, in goal importance.

In addition, valuing excellence indirectly impacts other goals (a phenomenon that will receive further attention in the article). Examples are goal 2.3—To project what the church stands for—and goal 11.3—To serve as a model for post-secondary education. Perhaps it could be a model for faith-based and secular institutions in developing countries in the South Pacific.

On a larger scale, limitations of human and financial resources, particularly in developing countries, present a real challenge to attaining excellence in educational endeavours (not to mention other essential services). The situation is exacerbated in times of economic, political, social, environmental and health crises (COVID-19 being an example of the latter).

Service

Service is another value embedded in some HPGs, as evidenced particularly by goal 8.1, but

at a slightly lower rank (GRD = -2). The value is further amplified in the curriculum areas, where Teaching and Theology (both retained their HPG status) together with two new HPG status courses—Administration and Nursing—fall into the Human Services classification of vocations. For Christians, unsurprisingly, service is a theme found throughout the canon of Scripture stretching from Genesis to Revelation. It is more than a humanitarian ideal, but a deeply biblical concept, with references to Jesus' mission (Luke 22:27; 19:10), and his invitation to his disciples: "Freely you have received, freely give" (Matthew 10:18, NIV).

Furthermore, tertiary education institutions do not exist in an academic bubble. The expectation for Christian faith-based ones is that a learning community should function, *inter alia*, as 'salt', 'leaven' and 'light'. It can be argued that in developing countries particularly, an institution should directly benefit the community where it is located (hence HPG 8.1 of responding to the real needs of faith communities located in developing countries of the South Pacific), but not *only* the faith community to which the institution belongs. The target should also include wider community needs, as these become apparent and can be matched with resources available to the institution. This raises the question of how service learning—knowledge *applied* for the benefit of society at large and the immediate community—might be incorporated into a tertiary curriculum, whether in a formal or informal mode.

Within the framework of a Christian worldview, the rationale for service, as a prized value, should be beyond a socio-political agenda of rights, equity and justice, important as these are and that they find ready and fierce expression in the warnings of Old Testament prophets. Even more important, authentic service is motivated by grace and love; without display or expected reward. Through service, God's love is internalised *and* externalised, demonstrating a recognition of the value of human beings, as God is encountered simultaneously on the vertical and with neighbour on the horizontal dimension of Christians' personal lives.

Excellence and service are thus two preeminent values that are embedded in institutional goal statements that have retained their high priority ranking over more than two decades, while two new HPGs in the curriculum category also align with service.

Religion and culture

The data show that two of the 15 HPGs, which retained their *original* HPR, come under the category of Religion and Cultural Orientation. (They were

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TABLE A: Institutional Goal Statements (IGS) from the Original Delphi Study that retained their High Priority Ranking in the Follow-up Study

Data showing –

1. IGS from the Original Delphi Study (O) that **retained** their High Priority Goal Ranking in the Follow-up Study (FU), together with their **Importance Goal Rating Mean Score [IGRMS]** and **Importance Goal Ranking [IGR]**... [The suggested embedded and/or associated values—listed in alphabetical order below each goal *—were not included in the Original Study questionnaire, completed by participants.]
2. The **Importance Agreement Level [IAL]** reached for goal statements in the Original Study (O) & Follow-up Study (FU).
3. The **Achievement Goal Rating Mean Score [AGRMS]** and the **Achievement Agreement Level [AAL]** in the Follow-up Study (FU).

Key for Level of Agreement

Unanimity (U) 90-100%; Consensus (C) 75-89%; Majority (M) 51-74%; Bi-Polarity (B-P) 50%; Plurality (P) < 50%

Calculated as the highest Likert scale data cell combined with the next highest *adjacent* one, expressed as a percentage of all cell totals (Dajani, 1979).

Goal Category & Goal Statement		IGRMS		IGR		IAL		AGRMS	AAL
		O	FU	O	FU	O	FU	FU	FU
GOVERNANCE									
1.1	To respond to the control of a representative governing body selected from within the church organisation [*accountability, authority, community, belonging, loyalty, power, trust]%	1.75	1.66	11	22	U	C	2.06	C
RELIGIOUS AND CULTURAL ORIENTATION									
2.1	To build a philosophic foundation that emphasizes the biblical view of man, culture and society, work, art and technology. [*faith, hope, spirituality, vision, worldview integration]%	1.41	1.38	2	8	U	U	2.29	M
2.3	To project what the church stands for [*community, fairness, faith, integrity, learning, ministry, nurture, service, well-being]	1.87	1.42	22	10	C	U	2.50	C
CLIENT ENTRY CRITERIA									
5.4	To accept applicants who are desirous of being in harmony with the principles, ethics and guidelines of the institution [*belonging, compatibility, harmony, self-discipline]	1.75	1.60	11	19	C	U	2.84	M
STAFF SELECTION CRITERIA									
6.1	To employ staff who possess qualifications and experience relevant to educational needs in developing countries in the South Pacific [*credibility, complementarity, effectiveness, expertise, identity, knowledge]	1.62	1.44	8	11	U	U	2.81	M
6.2	To appoint staff who identify with the goals and programs of the institution [*commitment, cooperation, empathy, harmony, service]	1.54	1.40	4	9	U	U	2.42	M
CURRICULUM									
	To provide education and training in the following areas:								
7.13	Teaching [*commitment, excellence, knowledge, learning maximization, professionalism]	1.60	1.36	7	7	U	U	1.74	U
7.14	Theology [*agape love, authenticity, biblical knowledge, faith, ministry, spirituality, worship]	1.56	1.28	5	4	U	U	1.94	C

Goal Category & Goal Statement		IGRMS		IGR		IAL		AGRMS	AAL
		O	FU	O	FU	O	FU	FU	FU
SERVICE									
8.1	To respond, in particular, to the real needs of the Seventh-day Adventist Church in the developing countries of the South Pacific [*altruism, applied knowledge, empathy, loyalty, service, usefulness]	1.49	1.33	3	5	U	U	2.61	C
MANPOWER [HUMAN RESOURCES] REQUIREMENTS									
9.3	To produce qualified individuals who are personally committed to serve the community and the church in South Pacific developing countries [*commitment, community, goodness, love, service]	1.56	1.27	5	3	C	U	2.18	M
EDUCATIONAL PRACTICE AND INNOVATION									
10.1	To promote a balanced work-study approach to education, which emphasizes the development of the whole person [*balance, holistic living, life experience, personal growth, responsibility, well-being]	1.35	1.26	1	2	U	U	2.14	C
10.4	To demonstrate the principle of self-reliance to the church and the community [*initiative, inventiveness, resourcefulness, skill]	1.78	1.59	13	17	U	U	2.80	M
EXCELLENCE									
11.1	To uphold a high standard of academic excellence [*excellence, merit, quality]	1.83	1.22	16	1	U	U	2.33	C
11.2	To graduate students whose qualifications are recognized by developing countries in the South Pacific [*approval, credibility, recognition, status]	1.86	1.53	20	14	C	U	2.16	M
11.3	To serve as a model of post-secondary education in developing countries in the South Pacific [*diligence, exemplariness, idealism, optimism, quality]	1.85	1.59	19	17	U	U	2.22	M

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To respond to the control of a representative body selected from within the [SDA] church organization ... barely qualified as a high priority goal, having lost 11 ranks.”

goals 2.1 and 2.3 respectively; see Table A). To underscore the raised profile of this category, participants' ratings in the follow-up study put goals 2.2 and 2.4 also in the new HPG group of 22 (see Table B). A biblical view of life in its various dimensions work, art, technology, and society and culture thus remains a driving force for the institution. *Faith* and *spirituality* are perceived as significant values, being key elements in Christian belief and as new HPGs (2.2 and 2.4) suggest, there should not only be advocacy for these inherent values, but that they should be instrumental in shaping and defining the faith-tradition's identity and public image. To some degree, this higher ranking is not altogether surprising as most follow-up study respondents belonged to, were associated with, or were employed by the institution's sponsoring faith tradition. On the other hand, one should not overlook a possible concurrent countertrend, as indicated by goal 1.1 (GRD = -11) almost losing its original HPR, as discussed under the relevant heading below.

Governance

What should be underscored is the changed HPR (from 11 to 22) of goal 1.1—To respond to the control of a representative body selected from within the [SDA] church organisation. This rating seems to run *counter* to participants' expressed values affirmations and organisational alignment noted in the paragraph above and in view that most respondents were connected to the institution's sponsoring faith tradition. What explanation can be offered for this apparent discrepancy?

Participants continued to see the institution under the control/sponsorship of its parent faith tradition (see Goal 1.1, Table A, Agreement level = C). However, the goal barely qualified as a high priority goal, having lost 11 ranks. One could speculate that this shift in perception may be a desire for greater institutional autonomy, increased government funding, or an expression of patriotism rather than regional interests and organisational cooperation; perhaps an indicator of a growing national assertiveness and independence. Some, or all of

these factors may have contributed to a perception of considerable lessening in importance of goal 1.1. One can more fully appreciate the reason for the biblical 'stones object lesson' and accompanying instructions given to Joshua on Israel's crossing of the Jordan River, prior to entering the Promised Land, recorded in the Old Testament (Joshua 4:1-9).

Participants and organisational alignment
Goals 5.4, 6.2 and 9.3 bring together a set of values including belonging, commitment, cooperation, and service. These values are at the heart of any well-functioning open community or organisation. Moreover, the said values encapsulate the notion of *esprit de corps*, defined by the Collins Dictionary and Thesaurus as, "a consciousness of pride in belonging to a particular group with a sense of shared purpose and fellowship." *Espirit de corps* is both the driving force and 'social cement' that facilitates the smooth and orderly operation of such an institution's academic, socio-economic, and spiritual life. Further underpinning the perceived shared sense of purpose and fellowship is the institution's religious and cultural orientation and, importantly, staff and students' personal Christian faith and practice.

Educational practice and innovation
Goals 10.1 and 10.4, belonging to the Educational Practice and Innovation category, were two more goals in the set of goals that retained their HPR designation. Values such as holistic living, well-being, life experience, resourcefulness, and initiative being held in remarkably high regard, is thought provoking.

It is not standard practice for tertiary institutions in South Pacific developing countries to combine work and duties as part of students' overall study programs. In this case study, the goal—To promote a balanced work-study approach to education which emphasizes the development of the whole person—was highly ranked (first and second in successive studies). Students' expected work contributions and experiences were located on the campus or further afield, ranging from locations such as a library, residence hall, office, school, or kitchen, to a farm, laundry, village, waste disposal site/depot, landscaping facility and hospital, among others. Experiences at these locations or facilities may be part of, or external to their study program. An example typical of this program—one through which 'values became clearly visible'— is reported by Litau and Bridcutt (2016):

Students took part in a service initiative called Community at Excellence Development Training, which has been integrated into the academic program at

PAU's School of Arts and Humanities.

One of the service projects involved building an incinerator — the first of its kind for the village, which had previously struggled with lack of waste management facilities...

The second project has benefited the 700 children enrolled at Tubuseria Lower Primary School, where nine PAU students catalogued and set up a library of more than 100 [donated] books ... (p.8).

On campus, such a program facilitates the interaction of staff and students on a personal basis in extended roles—beyond academia—thus, importantly, contributing not only to students' personal growth, the taking on of responsibility and developing a work ethic, as well as enhancement of their skill sets, but also the reduction of institutional expenditure being an added bonus.

Arrangements of this kind generally work well at a tertiary institution where all students are housed in on-campus residences. However, providing work experience opportunities for all students will require administrative creativity for HPG 10.1 to be realised. This will be a particular challenge when an increasing number of the institution's enrollees are "day students" who commute from nearby quasi-suburban areas on buses or private transport and who might question their need for a work-study approach to tertiary education; their expectations being based on other tertiary institutions' *modus operandi*.

As already noted above, there has been some *re-ordering* in the ranking of HPGs as a result of the follow-up study. Importantly, what should not be overlooked, however, at this point, is the Level of Agreement at which 14 from 15 HPGs in Table A were validated in the follow-up study, i.e., *unanimity*. The discussion now turns to goals that newly gained high priority ranking.

Goals newly gaining high priority ranking

Institutional goal statements that *gained* high priority ranking in the follow-up study (previously not on the HPG list) are included in Table B, informing further analysis and prompting the discussion that follows. It asks, what values are embedded in these IGS?

Evangelism

Participants in the follow-up study rated goal 2.2—To perform a practical evangelizing function—much higher than the original Delphi group, changing its ranking from 43 to 21. The reason behind the change might be that the institution's faith tradition carries out this ministry across a widening spectrum, addressing PNG people's needs. Examples are programs dealing with domestic violence (Kama, 2017), literacy (Woruba, 2018b) and the environment

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personal
Christian faith
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TABLE B: Institutional Goal Statements (IGS) from the Original Delphi Study (O) that newly gained High Priority Ranking in the Follow-up Study

Data showing –

- IGS from the Original Study (O), their **former** ranking, and their **newly gained** High Priority Goal Ranking in the Follow-up Study (FU), together with their (O) and (FU) **Importance Goal Rating Mean Score [IGRMS]** and **Importance Goal Ranking [IGR]**. [The suggested embedded and/or associated values—listed in alphabetical order below each goal statement*—were not included in the Original Study questionnaire, completed by participants.]
- The **Importance Agreement Level [IAL]** reached for goal statements in the Original Study (O) & Follow-up Study (FU)
- The Achievement **Goal Rating Mean Score [AGRMS]** and the **Achievement Agreement Level [AAL]** in the Follow-up Study (FU)

Key for Level of Agreement

Unanimity (U) 90-100%; Consensus (C) 75-89%; Majority (M) 51-74%; Bi-Polarity (B-P) 50%; Plurality (P) < 50%

Calculated as the highest Likert scale data cell combined with the next highest adjacent one, expressed as a percentage of all cell totals (Dajani, 1979).

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what should not be overlooked ... is the Level of Agreement [unanimity] at which 14 from 15 HPGs in Table A were validated”

Goal Category & Goal Statement	IGRMS		IGR		IAL		AGRMS	AAL	
	O	FU	O	FU	O	FU	FU	FU	
RELIGIOUS AND CULTURAL ORIENTATION									
2.2 To perform a practical evangelizing function. [*community, creativity, interdependence, nurture, passion, support, tradition, vision]	2.09	1.65	43	21	C	U	2.39	C	
2.4 To foster an integrated values and cultural structure that should be characteristic of Seventh-day Adventist Christian communities in the South Pacific islands. [*community, creativity, interdependence, nurture, passion, support, tradition, vision]	1.94	1.49	28	12	C	U	2.62	C	
CURRICULUM									
(i) To provide education and training in the following areas:									
7.01 Administration [*accountability, ethics, leadership, planning, professionalism, transparency]	2.00	1.56	33	16	C	U	2.71	M	
7.10 Nursing [*altruism, commitment, compassion, competency, human dignity, social justice]	2.59	1.65	57	21	M	U	2.22	C	
7.16 Degree [*competence, excellence, knowledge, quality, skill]	1.92	1.33	25	5	C	U	1.65	U	
SERVICE									
8.4 To provide youth with saleable employment skills [*achievement, advancement, personal fulfillment, human dignity, self-improvement]	2.11	1.49	44	12	C	U	2.12	C	
EQUALITY									
12.1 To give, in its programmes, recognition and elevation to the status role of women in developing countries in the South Pacific [*acceptance, empowerment, equity, fairness, integrity, respect for others]	2.00	1.63	33	20	M	C	2.53	M	

(Kapamu, 2018). The programs also include diabetes and personal health/hygiene education, community projects (Nalu, 2017) and prison visitation (Yasaking, 2019)—besides a time-honoured spiritual

outreach—thus coalescing with goal 8.1, (see Table A) in meeting people’s real needs: physical, social, mental, emotional, and spiritual.

This commentary may explain why this particular

curriculum area has now a demonstrably higher profile of importance, climbing from rank 33 to 16.

Curriculum: Nursing

It seems likely that Goal 7.10, Curriculum/nursing, showing the highest increase in importance (GRD = +36), joined the HPG category because the nursing course had been transferred to the institution from its prior geographical location. Also, earlier targeted Australian development grants may have been a factor. The grants funded personnel (academic lecturers/tutors), classroom and dormitory buildings—all linked specifically to a perception of the Nursing program, particularly Midwifery, as a significant contributor to improvement of public health in the nation. However, the change in rank may also be perceived as neatly fitting into a ‘parcel’ of symbiotic goals that embody altruism, commitment and service and is consequently seen as highly important in relation to institutional goal alignment.

Curriculum: Degree level only

Goal 7.16—To offer courses at the *degree* level—has already been commented on in relation to excellence. Looking beyond excellence, however, (and in a broader national context) is of interest in that available data indicate that on average, across all careers and locations, the difference between a diploma and a degree qualification in PNG, leads to an expected 24% increase in salary (Salary Explorer, 2020). Hence respondents, perhaps with a view to students’ future employment, apparently see no valid reason for a tertiary education institution to provide courses at a lower level.

Curriculum: Saleable skills

The upward movement of goal 8.4—To provide youth with saleable employment skills—from rank 44 to 12 (GRD = +32), the second highest rank change, is particularly noteworthy. It reflects a continuing competitive salaried employment situation in PNG, where the country’s 15-24 age group, representing 20% of the population (Index Mundi, 2020) and forming a large cohort of job seekers, is faced with limited opportunities in an economy that has a basic hourly minimum wage equivalent to US\$1.00 (Trading Economics, 2019). The World Bank (2019) regards the need for setting the PNG non-resource economy on a more robust growth trajectory as essential, to absorb this substantial number of young job seekers. The rise of goal 8.4 also raises the issue of competing (and possibly conflicting) values inherent in goals 8.1 and 8.4 respectively—with altruism and service on the one hand, and self-fulfillment and advancement on the other. Again,

more will be said about this matter further on in the article.

Status of women

The move of goal 12.1—To give, in its [the institution’s] programmes, recognition and elevation to the status and role of women in developing countries in the South Pacific, from rank 33 to 20 (GRD = +12), should be an encouragement for advocates of gender equality. It represents an increasing recognition of the values of equity, empowerment, fairness, and respect for others.

At this juncture, it is fitting to re-visit and comment briefly on the list of *all* the posited high priority goals. A ‘rear-vision mirror’ look clearly shows that the follow-up group, almost unanimously (at a 90-100% level of agreement), continues to espouse an overall honorific view of the institution. The institution is expected to make a niche, quality, service-oriented contribution to community, church and national development in critical, essential areas. This includes spiritual, intellectual and ethical guidance and leadership in education, health, administration and business, among others. The challenge, however, will always be for aspiration to be matched by achievement.

The entry of the above-mentioned new goals into the HPG list, correspondingly connotes the exit of others. What are these goals?

Loss of high priority goal ranking

Which institutional goal statements (previously on the HPG list) lost their high priority ranking in the follow-up study and what values are embedded in these IGS? Table C provides information to assist analysis and discussion of these changes.

Client entry criteria

The category, Client Entry Criteria, lost two HPGs. They were goals 5.2—To admit students who are motivated by service to others—and also goal 5.5—To give enrolment preference to students from South Pacific developing countries. Regarding goal 5.2, there is some apparent negation of the notion of service and commitment. However, one participant’s written observation in the comments section of the questionnaire noted that it should not be an *entry*, but a likely course *exit* expectation. Another participant noted: “It is hard to identify what actually the [students’] motives are.” Conversely, it might be argued that the ethic of service (as mentioned in relation to goal 8.1 and new HPG 8.4) is being counteracted by a spirit of personal fulfilment perhaps career advancement, suggesting a situation of potentially/actually competing or conflicting goals, previously referred to. For clarifying such

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elevation to the status and role of women in ... the South Pacific, from rank 33 to 20 should be an encouragement for advocates of gender equality.”

TABLE C: Institutional Goal Statements (IGS) that lost their High Priority Ranking in the Follow-up Study

Data showing –

- IGS from the Original Study (O), their **former** High Priority Goal Ranking and new, **lower Non-HPGR** in the Follow-up Study (FU), together with their (O) and (FU) **Importance Goal Rating Mean Score [IGRMS]** and **Importance Goal Ranking [IGR]**. [The suggested embedded and/or associated values—listed in alphabetical order below each goal statement*—were not included in the Original Study questionnaire, completed by participants.]
- The **Importance Agreement Level [IAL]** reached for goal statements in the Original Study (O) & Follow-up Study (FU).
- The **Achievement Goal Rating Mean Score [AGRMS]** and the **Achievement Agreement Level [AAL]** in the Follow-up Study (FU)

Key for Level of Agreement

Unanimity (U) 90-100%; Consensus (C) 75-89%; Majority (M) 51-74%; Bi-Polarity (B-P) 50%; Plurality (P) < 50%

Calculated as the highest Likert scale data cell combined with the next highest *adjacent* one, expressed as a percentage of all cell totals (Dajani, 1979).

Goal Category & Goal Statement	IGRMS		IGR		IAL		AGRMS	AAL
	O	FU	O	FU	O	FU	FU	FU
CLIENT ENTRY CRITERIA								
5.2 To admit students who are motivated by service to others (the constituency of the church, the community, the region) as opposed to self-interest [*altruism, community, sacrifice, selflessness]	1.80	1.82	15	38	C	C	2.96	M
5.5 To give enrolment preference to students from the South Pacific developing countries [*differentiation, merit, fairness, interdependence, mutuality]	1.84	1.80	18	36	C	C	2.12	M
CURRICULUM								
(i) To provide education and training in the following areas:								
7.03 Agriculture and the environment [*biodiversity, conservation, cost-benefit, food security, stewardship, sustainability]	1.69	2.02	9	52	C	C	3.91	M
7.07 Health Education (Preventive) [*proactiveness, knowledge, quality of life, temperance, wellbeing, wholeness]	1.71	1.71	10	26	C	U	2.88	C
MANPOWER [HUMAN RESOURCES] REQUIREMENTS								
9.1 To prepare national personnel to assume responsibilities presently held by expatriates [*accomplishment, advancement, autonomy, enablement, power, success, trust]	1.83	1.82	16	38	C	C	2.98	M
EQUALITY								
12.2 To promote a non-elitist spirit [*equality, humility, justice, unpretentiousness]	1.86	1.86	20	44	C	C	2.57	U
FACILITIES								
13.2 To utilize an architectural style that takes into account Pacific cultures, climatic conditions, cost-effectiveness, and possible expansion [*beauty, comfort, cost-effectiveness, foresight, purpose, simplicity, traditions]	1.79	1.84	14	41	C	C	2.75	C

“ Available data indicate[s] ... the difference between a diploma and degree qualification in PNG, leads to an expected 24% increase in salary. ”

relationships between and among goals, Hudspeth (1974) recommends the use of the Cross Impact

Matrix Technique (its application lies outside the scope of this research study).

Giving enrolment preference to students from South Pacific countries (goal 5.5), surprisingly dropped from rank 18 to 36 (GRD = -18). The explanation may be that other entry qualifications are perceived as more important than geographical, economic or cultural background. Additionally, well-founded concerns of other Pacific Islands societies about PNG's high crime rate, making PNG unsuitable for their students (females in particular), may shape perceptions impacting this goal's decreasing importance.

Agriculture, the environment and elitism
Goal 7.3—To provide education and training in agriculture and the environment—registered the steepest loss in rank of any institutional goal (rank 9 – 52, GRD = -43)! This ranking is in stark contrast to the World Bank's (2019) observations of payoffs in economic diversification in the PNG agriculture, fisheries and tourism sectors, which are highly inclusive of young people and women. When goal 7.3 is seen in conjunction with the dislodgment of goal 12.2 (To promote a non-elitist spirit) from the HPG list, one may conjecture that it is no longer *avant-garde* to study a subject that is usually associated in PNG with subsistence farming. Consequently, it is not surprising that goal 12.2 has been dropped from rank 20 to 44 (GRD = -24). Faith-based organisational planning may consider prioritising vocational education in agriculture to the campus of an associated PNG sister institution.

Another goal (13.2) recorded a steep drop in ranking from 14 to 41 (GRD = -27). Utilizing an architectural style that takes environmental, social, and cost effectiveness factors into account, was no longer considered a HPG once the institution had been built, although some 'free comments' referred to the perceived need for comfort, e.g., air-conditioning in some areas, and additional residential accommodation.

Health

Goal 7.07—To provide education and training in health education (preventive)—registered a considerable loss in ranking from 10 to 26 (GDR = -16). Such a drop in perceived importance is worrying given the very high recorded rates of tuberculosis, malaria, infant mortality and diabetes in Papua New Guinea and the precarious state of health services throughout the country generally, and in remote areas particularly. Perhaps, in their rating, participants considered that Nursing encompassed preventive Health Education. That is a misapprehension and goal 7.07, given existing real needs in PNG, actually merits a HPG rating.

Levels of agreement

What must not be overlooked (see Table A and B, in particular) as part of the discussion, is the exceptional level of agreement reached (Unanimity, 90% and above) in the follow-up study for 21 of 22 HPGs. This applies to the goals that *retained* their HPG ranking and also to those that *newly gained* it. Similarly, there is evidence of an elevated level of agreement (Consensus, 75%-89%) for the ranking of each of the seven goals that lost their high priority status (see Table C).

Although, agreement levels on goal achievement consistently did not reach such raised levels, in 19/22 cases agreement was above 70% (see Table A, B & C), indicating, overall, that an additional Delphi round was not necessary.

On all counts, these outcomes suggest a most encouraging level of internal group coherence and consistency. The discussion now turns to what might be the gap between importance and achievement—between expectation and performance—as perceived by participants.

Expectation and performance

To presume that performance will match or even exceed expectation might be unrealistic, given no set criteria or indicators were provided to participants in the Delphi exercise. The data show relatively small 'gaps' in the rating mean scores between *goal importance* and *goal achievement* (ranging from 0.32 to 0.66) for high priority goals 7.10, 7.13, 7.14, 7.16, 8.4, 11.2, and 11.3 in the follow-up study (see Table A and B).

However, in contrast, the 'gaps' for HPGs 5.4; 6.1; 8.1 and 10.4 are substantial, as evidenced by a rating mean score difference of 1.20 or greater (see Table A and B). The difference between aspiration/expectation and perceived performance may partially be driven by the very strong emphasis on excellence. Data such as those above should be a focal point for faculty/administration and draw attention to a *non*-HPG with only a rank of 29—To establish and operate a continuous programme of self-monitoring and evaluation for the institution—because excellence is contingent on evaluation; both being part of an essential practice for organisations and institutions in reflecting on their *raison d'être*.

What may be concluded from the research findings?

Conclusion

A considerable proportion (2/3) of the 22 high priority goals of the original Delphi study *retained* their high priority ranking. Of the seven goals that *did lose* it, only three dropped below rank 40, from a total of 66 formulated goals. There was no

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draw attention to a non-HPG with only a rank of 29—To establish and operate a continuous programme of self-monitoring and evaluation for the institution—because excellence is contingent on evaluation”

evidence of serious high priority goal displacement, excepting relative to agriculture and the environment and building architecture. Given the noteworthy levels of agreement and acceptable achievement levels reached, this outcome essentially upholds and re-endorses the identification and ranking of high priority goals more than two decades previously. Regardless that institutional leaders and administrators may come and go, with many core values being intact and upheld, there is little or no indication of James Burtchae's (1998) *The Dying of the Light* syndrome. Furthermore, the results also point to the *continuing* relevance, importance, and durability of Delphi study outcomes (a finding that contributes to an issue seldomly dealt with in Delphi research and literature) regarding value-laden institutional goals; particularly as goals relate to worldviews that incorporate religious and cultural orientation.

Values that seemed unaffected by any 'drift' and were deeply embedded in a number of high priority goals, were excellence and service as these pertained to scholarship, staff and student performance, relationships with the community, the institution's reputation and the knock-on-effect for future student employment. What reasons may be offered for these results?

The resilience of goals may be explained in terms of the continuing quality, commitment and faithfulness of administration, faculty and staff to Seventh-day Adventist Christian education in general and keeping in mind the institution's mission and vision in particular. High priority goals have stood the test of time because they reflect and/or are underpinned by time-less biblical principles. The quinquennial institutional accreditation processes, organised through the South Pacific Division Education Department of the SDA Church, might be an additional reason.

With the emergence of new high priority goals, an increased emphasis on some values has resulted, namely spiritual outreach, leadership, equity, fairness, and self-fulfilment, and a corresponding decrease in others, relating to exiting high priority goals. However, this should not be regarded as the 'prevailing situation'. There are continuing, significant changes in the international tertiary landscape that also affect developing countries, and which give rise to meta-structural goals. These changes relate to and include government regulations and requirements to do with quality assurance; national goals and tagged funding; church governing procedures and the skilling of boards; and also, the research-teaching profile of tertiary institutions.

Potential new 'internal' institutional goals may be about the further democratisation of students' voice,

the non/implementation of compulsory worships, chapels or work-lines and similar programs. All of these issues will test the skills, resourcefulness and creativity of administrators, particularly as the number of non-residential and 'non-committed' students increases. Whether these challenges turn out to be threats to prized institutional values or opportunities for witness and evangelism will depend on the approach taken by administration and faculty, together with their reliance on the power of the Holy Spirit to change lives.

So far, nothing has been mentioned about the huge challenges triggered by COVID-19 and the resulting 'new normal'. This may subsequently lead to altered or radically new goals, methods, and means of learning and teaching and the 'delivery' (not only) of tertiary education, in the not-too-distant future.

In review, this research presents planners with credible evidence, in claiming that Delphi study outcomes may have a long life, as in this case study, where a representative, diverse group of knowledgeable participants was involved in providing opinions, preferences, and making value judgements. Moreover, the research suggests that it is incumbent for administrators, faculty, staff and decision-makers, of faith-based educational organisations and institutions in particular, to re-visit and examine current policies, practices and performance on a regular basis and in line with their bodies' *raison d'être*. There are considerable benefits from incisive, regular 'health-checks' that seek to ascertain whether core values are reflected by, and embedded in policy documents, board decisions, human resources procedures, curriculum content and instructional practices (among others), and which can reveal mis/alignment with one's compass and GPS—one's avowed institutional mission and vision.

In the final analysis, future administrators, planners and decision-makers, engaged in goal setting for an institution of Christian higher education, must take into account both external and internal environments, and also be very clear about the institution's purpose, values, character and culture, and how it is expected to contribute to its faith community and the wider public good. What logically follows for practising Christian educators to accomplish in the total learning-teaching environment, is the challenging task of 'walking the talk', turning words into *actions* and ensuring on-going quality assurance. **TEACH**

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Author information:

Wilfred Rieger is an Honorary Senior Research Fellow at Avondale University. His research interests include educational administration, pastoral care and chaplaincy, action research, and Delphi studies, particularly as related to Christian education.