

# ACADEMIC NURSE LEADERS' INTERPRETATION OF CONCEPTS AND PRIORITIES RELATED TO THE EXAMINATION OF SCIENTIFIC SHORT PAPERS, DISSERTATIONS AND THESES - PART 1

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## Abstract

*The purpose of this study was to establish whether there is agreement among academic nurse leaders in their interpretation of aspects and criteria related to the examination of scientific short papers, dissertations and theses. The Delphi technique was selected as the most appropriate method of data-collection for this type of study. The target population identified for this study consisted of the Heads of Nursing Departments or their delegates from the 18 universities of the four provinces of the RSA, self-governing and independent states of Southern Africa and Namibia, which offer nursing degrees.*

*Three rounds of questionnaires were sent to all heads of the 18 identified nursing departments. Participation was poor (nine participated in first round, nine in second the third round, no further rounds of questionnaires were sent due to the waning interest and poor participation.*

*Many divergent responses were received to most of the aspects included in the study. This indicates that with a few exceptions there is little or no agreement among academic nurse leaders in their interpretation of aspects and criteria relating to the examination of post-graduate scientific or academic treatises.*

## Opsomming

*Die doel van hierdie studie was om te bepaal of daar eensgesindheid onder akademiese verpleegleiers is betreffende hulle interpretasie van aspekte en kriteria rakende skripsies, verhandelinge en proefskrifte. Die Delphi tegniek is gekies as die mees toepaslike dataversamelingstegniek vir hierdie tipe studie. Hoofde van Verpleegdepartemente of hulle afgevaardigdes van die 18 universiteite in Suider-Afrika (dit wil s + die vier provinsies, selfregerende en onafhanklike state en Namibi-) is as teiken populasie geïdentifiseer.*

*Drie rondtes vraelyste is uitgestuur aan al die hoofde van die 18 geïdentifiseerde verpleegdepartemente. Deelname was swak (nege het in die eerste rondte deelgeneem, nege in die tweede rondte en ses in die derde rondte). Alhoewel daar nog geen konsensus tydens die derde rondte bereik was nie, is geen verdere vraelyste uitgestuur weens die afname in belangstelling en swak deelname.*

*Aansienlike uiteenlopende responsies is op meeste van die aspekte was in die studie ingesluit was, ontvang. Dit is 'n aanduiding dat daar min of geen eenstemmigheid onder akademiese verpleegleiers is betreffende hulle interpretasie van aspekte en kriteria rakende nagraadse wetenskaplike of akademiese verslae.*

## INTRODUCTION

The writing of scientific papers, dissertations and theses (collectively called scientific or academic treatises) is probably one of the most crucial stages in the academic development of any student. These scientific treatises serve as documentation of the students thoroughness and ability to undertake scholarly empirical work, and are requirements for the award of advanced (postgraduate) degrees, namely the masters or doctoral degree. However, before such degrees are awarded, these scientific treatises have to pass through another crucial stage, that of examination. This is the last phase in the successful or unsuccessful conclusion of the treatise, and of great importance both to the University offering the degree and to the student submitting the treatise. The University offering the advanced degrees assumes responsibility to the public to establish and maintain excellence and high standards in the education of its students and responsibility to the students to protect them from possible unfair bias of a single examiner. There is thus common agreement that the student's work should be examined not only by one person but by a panel of examiners. It is the task of this panel to determine among others whether the student's work is presented in a scientifically accepted manner in accordance with the accepted practice of the specific discipline in which the candidate wishes to be awarded a degree. The panel normally consists of the supervisor/promoter and two independent examiners, of whom one is external to the University which is awarding the degree.

Examiners normally receive a list of guidelines or criteria for examination from the particular University where the

degree is to be awarded. These guidelines vary in specificity from very broad to very detailed, yet focus on similar aspects but nevertheless, reports in the literature suggest that these guidelines do not necessarily provide the intended outcome (Arrangies & Du Plessis 1992, Landman 1992, Vorster 1992). It has been claimed by Vorster (1992: 91) that the examination is often based on feeling or impression; that some examiners appear to accept only their own views and reject any other views, including methods, strategies or perspectives that do not fit within their own personal framework. The examination therefore, instead of being objective and unbiased and consistent with universal norms agreed upon by the scientific community, tends to become a personal and subjective matter, with each examiner expressing his/her own opinion about standards. Practical experience in the handling of examiners' reports as well as complaints raised by colleagues lend support to the fact that Vorster's claims are as applicable to nurse examiners as they are to other disciplines. For example, when there is a difference of 19,29 or even 40 percent in the marks allocated by different examiners for the same work, or when one examiner fails a student outright because she does not agree with the theoretical perspective used by the student, or with the language and style of the student, or because there are too many typing errors, but makes no reference in her report to any scientific merit, while the other examiner/s award a good mark, sometimes even distinction, and report/s on the scientific merit, it is obvious that these examiners are using different criteria and have different priorities. They are not guided by universal criteria which is a matter for concern.

In their textbook on nursing research, Burns & Grove (1987) maintain that although a list of criteria can serve as a useful guide for critiquing, it nevertheless requires a sophistication in research knowledge not yet acquired by the inexperienced. Conducting a critique is not a basic skill and requires thorough preparation; undoubtedly it requires shared meanings in the interpretation of concepts and prioritising of criteria. As Wittgenstein (1961) pointed out, "meaning is use". When a person uses a word he does so according to what he believes it to mean. There is no guarantee that the meaning that he imputes corresponds to the meaning intended by the writer or to the meaning imputed by another. This suggests that examiners who have not been exposed to similar or sufficient learning experiences

with regard to examining are likely to interpret concepts and priorities differently from one another and also differently from the way the scientific community uses them. It is however of the utmost importance for both the student and the university, that everyone who deals with postgraduate nursing projects shares common values and understandings, or in other words that there is a meeting of the minds on issues regarding postgraduate examination.

This study was designed to establish whether there is agreement among academic nurse leaders in their interpretation of aspects and criteria related to the examination of post-graduate projects. Academic nurse leaders constitute the pool from which the majority of external nurse examiners are nominated, hence the focus on them.

Specific aims of the study were - to establish:

- how aspects and criteria pertaining to masters and doctoral studies are defined by academic nurse leaders;
- which evaluation criteria are considered important and which unimportant;
- what kind of evaluation instruments are preferred;
- whether there is consensus among participants with regards to meanings of aspects and criteria pertaining to masters and doctoral studies;
- the extent to which participants' interpretations are in agreement with universal scientific norms described in the literature.

## METHOD

The Delphi technique was selected as the most appropriate method of data collection for this study. The Delphi technique according to Roberts & Burke (1989: 359) is a specialised type of survey involving several rounds of questionnaires for developing a consensus among a group of experts on the topic of interest. The Delphi technique has also been used in nursing to assess priorities, make predictions and to measure the judgement of a group of experts (Burns & Grove 1987, Polit & Hungler 1991, Treece & Treece 1986, Woods & Catanzaro 1988). The technique has the advantage that any especially persuasive or prestigious expert cannot have an undue influence on the opinion of others as could happen in a face to face situation.

The group of experts identified for this study consisted of the heads of nursing departments or their delegates from the 18 Universities in Southern Africa offering nursing degrees. Heads of nursing departments are appointed academic leaders and by virtue of such appointment are empowered to influence their subordinates - a condition not necessarily applicable to other experts. Nursing departmental policies generally reflect the views of the head of the department. Heads of nursing departments or their delegates therefore were considered the most appropriate target group.

## PROCEDURE

The Delphi technique involves several rounds of questionnaires. For this study three rounds of questionnaires were sent to all heads of nursing departments of 18 identified Universities. To ensure anonymity the South African Nursing Association (S.A.N.A) acted as mediator. Questionnaires were sent out and replies were received by the SANA which were then forwarded to the researcher. It was not possible therefore for the researcher to identify any respondents.

In the first round the selected panel members were asked to express their viewpoint about five given aspects related to examination of post-graduate work.

Firstly members were requested to define and differentiate between a scientific short paper (skripsie), a dissertation (verhandelings) and a thesis (proefskrif) and to indicate their interpretation of the purpose of each of the three study projects. This aspect was included because of differences in requirements for these documents. If examiners are not aware of these differences they may apply identical evaluation criteria to all of them or one examiner may be more rigid in evaluating a masters dissertation than another with a doctoral thesis.

With the second aspect members were requested to indicate what they understand by original research, contribution to knowledge and ability to do independent research. Most Universities specify that masters and doctoral work must show evidence of the latter two, while doctoral theses must also comply with the first of the above criteria. Examiners therefore must include this in their evaluation and should be clear on the accepted usage of these terms. The third aspect was included to identify examiners' preferences with regard to evaluation instruments. Examples of three types were given, namely a detailed

one which indicates weights for each criteria, a broad one without weighting which allows considerable flexibility, a rating scale for each of the criteria, and a fourth option was included for another type. If the latter option was selected, it had to be described. Members were also requested to provide reasons for their choice of a particular instrument.

The fourth area of focus was a list of commonly used evaluation criteria. Members were asked to delete those that they considered unimportant, add those that they thought were missing and to explain what they considered should be included under each criteria.

The fifth and last aspect dealt with passes and failures. Members were requested to explain when they would expect a dissertation or thesis to be passworthy, worthy of distinction, requiring major revision or doomed for failure.

The first round of questionnaires was mailed in June 1990. A covering letter was included inviting the members to participate, explaining the purpose of the study and requesting them to return the responses within 30 days if possible. Four months later only nine members had participated. As the questionnaires were returned anonymously it was not possible to identify non-respondents. The nine questionnaires received, formed the basis of the questionnaires for the second round. The responses to the questions were sorted and the combined information of all the panel members was used to make up a new questionnaire. As panel members had been asked to define terms or express their viewpoints, responses were very divergent. Some were very vague and broad and others very detailed. Although some of the responses contained information that was similar, with very few exceptions they also differed on certain points. Therefore with the exception of identical responses, all responses from each panel member were included in the second questionnaire. The responses were not edited but included in their original form.

In the second round, panel members had to consider the other participants' responses as they responded to the new questionnaires. They were asked to indicate their agreement or otherwise with each response listed in the questionnaire on a seven-point rating scale (1-7) with 1 = SD (strongly disagree) and 7 = SA (strongly agree). The second round of questionnaires was again sent to all 18 heads of university nursing departments in Southern Africa, and in a covering letter they were all invited to participate. Panel members

who had not participated in the first round were invited to add their responses to the list if they did not agree with any of the views expressed so far. However, again, only 9 panel members completed and sent in their questionnaires and when no further responses had been received by August 1991, planning for the third round started. Questionnaires from the second round were coded, tallied and categorised. The number of responses to each scale point (1-7) for each response item were calculated, as was the middle range in which at least 50 percent of responses fell. In essence the questionnaires for the third round remained the same as for the second round, except for additional feed back. The number of responses to each scale point for each response item was indicated in brackets above the scale-point, while the middle range was indicated by means of a square bracket. This is illustrated in the example below.

*"Critical ability consists of making critical assessments and the candidate must show that he/she is able to question and analyse other findings, ideas and concepts and draw his/her own conclusions.*

(1) (1) (3) (4)  
1 2 3 4 5 [6 7]"

Where responses to an item were too diffuse no middle range was indicated. Panel members were once more invited to review the other member responses and to evaluate or compare their own opinions with those of the other members. They were asked to indicate their agreement or otherwise with each response item on the seven-point scale, and to provide a comment if their response fell outside the indicated middle range.

By the end of May 1992 only seven of the third round questionnaires had been received, of which one was blank and therefore not usable. Because of the waning interest and because it was not considered cost-effective nor meaningful to continue with a fourth round no further questionnaire was designed. Each one of the questionnaires received was first analysed separately, item for item, to establish both the degree of agreement or disagreement with each response item and the priority rating given to particular response item in relation to specific aspects. The information obtained was then compared across all six questionnaires. A total of 31 items each with at least two different viewpoints, but more frequently seven or eight were composed. Finally the meanings attributed to commonly agreed

upon items were compared with descriptions in the literature to determine the degree of agreement. The data did not lend itself to further statistical analysis and thus a narrative description is given of the results.

## RESULTS

The results of each of the investigated aspects relating to postgraduate studies are presented in some detail.

### Definitions and purposes of post-graduate projects

#### Scientific short paper (skripsie)

A number of definitions of a scientific short paper were formulated by panel members during the first round. These are reflected below:

- (1) A pilot study.
- (2) Part of an honours degree.
- (3) Part of a master's degree.
- (4) A paper to be presented or published.
- (5) An empirical research report which is limited in terms of literature and sample.
- (6) A paper which is limited in terms of its field of study length of paper and scope.
- (7) A scientific paper of limited scope and length. (+ 60 p. A4 paper 1 spacing). The criteria are technical competence, critical ability, lucidity and coherence. It should provide evidence that the candidate is conversant with the scientific method but not necessarily empirical research. It is usually part of the requirement for obtaining a masters degree in accordance with prescribed university regulations. **(Selected by three respondents in final round).**
- (8) A scientific essay/assignment on a specific subject which is of more limited scope than a dissertation but provides evidence that the student is conversant with methods of research. **(Selected by two respondents in final round).**
- (9) A paper which is systematically compiled after collection of objective information and properly documented using recognised reference techniques. It is short or long enough to be presented at a

meeting, symposium conference or to be published in a scientific or professional journal. It is crucial that it meets the objective for which it was originally undertaken.

**(Selected by one respondent in final round).**

From the given definitions, it can be deduced that there is no shared agreement among panel members on the meaning of a scientific short paper. The term was viewed from different perspectives and within different contexts and definitions varied from vague and broad to detailed on specific. Very few respondents included properties or characteristics of the phenomenon or indicated the differences between a scientific short paper and a dissertation or thesis. This suggests that the focus for evaluation or examination would differ among different examiners. The seventh definition listed, which in the final round was selected by three of the respondents to best reflect their view can be considered the most explicit and flexible of them all. It is more or less consistent with a definition in the literature by Arrangies and Du Plessis (1992: 34) but to differentiate it better clearly from other scientific treatises, the first line could be amended as follows: *"A scientific paper of more limited scope and length than the dissertation"*. Little agreement was found among panel members in their interpretation of the purpose of a scientific short paper. Responses such as *"Is part of a structured master's degree; serves as a pilot study for a master's project; is part of the requirements for honours level; to provide evidence that the candidate is conversant with the scientific method, and the marks contribute to the total marks for a master's degree; to provide evidence that the candidate is conversant with the scientific method and can express himself according to the norms of a scholarly person<sup>(a)</sup>; to expose a student to research while it only counts 50% of the total mark<sup>(b)</sup>; to inform persuade convince or stimulate<sup>(c)</sup>"*.

The three last statements (a), (b) and (c) above were selected by two, one and three respondents respectively as being the most appropriate interpretation of the purpose of a scientific paper according to their view.

### Dissertation

The definitions of a dissertation as depicted below were not quite as divergent or varied as those of the scientific short paper but vary in vagueness or specificity.

(1) A scientific formal and more

detailed enquiry than undertaken for a scientific paper, into a specific subject or phenomenon.

(2) A written document presented for examination which provides evidence in terms of language, style, documentation and argumentation that the student is conversant with the methods of research.

**(Selected by 2 respondents in final round).**

(3) A research report which should not have limitations that the researcher could have excluded by better preparation. Literature survey should be fully done, sample should be adequate and preferably not a convenience sample. It can be a replication study. It proves that the candidate can do independent research.

**(Selected by 1 respondent in final round).**

(4) A comparatively elementary research paper of defined scope and limited length (+ 120 p. A4 paper 1 spacing). The criteria are: technical competence, evidence of adequate scholarly research, critical ability, lucidity and coherence. It should have a theme which is implicit in the title, and which is sustained throughout. A dissertation is not required to be an original contribution to knowledge, though it should contribute to an insight into or understanding of its subject.

**(Selected by 3 respondents in final round).**

(5) A dissertation is limited to 80-100 pages and must be based on empirical research data.

The fourth definition in the above list appears to be the most specific and also the most congruent with a definition by Arrangies and Du Plessis (1992: 34). Perhaps one needs to add that it is a requirement for a master's degree or qualify it as a master's dissertation; universities differ in their nomenclature and some talk of master's theses and doctoral dissertations.

The panel members' interpretations of the purpose of a dissertation were rather vague. Responses such as *"submitted for a master's degree; to contribute 50% towards a masters degree; to give a valid and appropriate answer to a research question; to expand the body of knowledge"* and *"to enable a candidate to acquire a master's degree and to develop research competence"* were received. During the second round, 6 of the nine 9 panel

members and during the final found all 6 participating members opted for the last mentioned response.

It doubtful whether these descriptions are explicit enough to provide guidance to the examiner. In a chapter on *"The nature of dissertations and theses"*, Botha (1992: 12) lists a number of abilities which should be demonstrated by the student in a dissertation. In a nutshell these are more or less consistent with the criteria stated in the definition and perhaps would be the most appropriate to explain the purpose of a dissertation.

### Thesis

Panel member's definitions of a thesis contained far more commonalities than either those of scientific essays or dissertations. There was also less disagreement among members as to which one of the definitions was the most suitable. In the final round only two responses were selected by members as most appropriately reflecting their view and these are presented below:

(1) A doctoral thesis is a considerably more demanding research paper than the master's dissertation and it must be "an original contribution to knowledge". There is no strict limitation on length, but 250-300 pages (A4 1 spacing) would usually suffice. It should cover a wider field or at least show a greater sense of perspective than does the master's dissertation. Candidates should provide evidence of an awareness of basic theoretic problems directly or indirectly relevant to their particular topic and should reveal an extensive as well as an intensive knowledge of their subject.

**(Selected by 5 respondents in final round).**

(2) A thesis is a research report which shows that the candidate can make a contribution to the building of science. It must show evidence of abstract thinking of a high level and of the research process itself at a more complex level than the dissertation. A national sample and an exhaustive literature survey is required.

**(Selected by 1 respondent).**

Although there are some similarities among the two definitions, the first one is much more explicit and provides much clearer guidelines to an examiner. The second one is problematic in that it stipulates that a national sample is required. As far as could be established no university has such a requirement. In

fact it would be an unrealistic and rigid requirement which might be neither cost-effective or feasible. As with the dissertation, the information constituting the first definition is consistent with that gleaned from the literature. (See Arrangies & Du Plessis 1992: 34, Perreira 1984: 35 and Botha 1992: 12).

As with the scientific short paper and the dissertation, panel members' interpretations of the purpose of a thesis were very vague. Responses such as "submitted for a doctoral degree; to enable candidates to acquire a doctoral degree; to build or test theory; to participate in theory building or to provide evidence of the quality of the candidates scholarship, as well as extensive and intensive knowledge of his/ her subject and to enable him/her to acquire a doctoral degree were given". The last mentioned response was selected by all nine panel members of the second round and all six members who participated in the final round as the most appropriate. Only one member suggested that "to provide evidence of theory building should be added". This may be problematic though, depending of course on how wide or how narrowly theory building is defined. It is also not an explicit requirement of the universities. On the whole the explanation accepted by the panel members is not sufficiently explicit and does not even contain all the criteria listed in the definition. Universities require that a doctoral thesis should show evidence of an original contribution to the knowledge and insight of the subject as well as evidence of indepth study and of mastery of research methods and scientific merit. These are aspects an examiner needs to look for in doctoral examinations.

**Interpretations of the concepts *original research, contribution to knowledge and independent research***

#### Original research

A variety of interpretations of the term *original research* were received and included "the first/primary research on a subject; the individuals own unique research of a problem; creative and systematic investigation; the researcher asks a question that has not been asked before; comes up with new facts which were previously not known; a product of a researcher's unique creative ability; not duplicating previous research and finally originality lies in contribution to knowledge of insight into/understanding of field, freshness of approach or value of a reassessment; secondary sources can be used, but a mere synthesis or survey of others' findings is unacceptable; stress is

*laid on personal approach and insight, as well as initiative".*

Two of these responses could cause confusion when examining, namely "the first/primary research on a subject" and "the researcher asks a question that has not been asked before". A student may have researched a subject on which much research has already been done, but may have looked at it from a different perspective or used a different method. However, because it is not the first research on the subject, would the examiner who regards this essential, reject the thesis? Would it be fair? The last-listed explanation is the most explicit one among those listed and contains most of the facets that were listed by the others. During the second round of the study five of the nine participating panel members had selected it as the most suitable and during the final round it was selected by five of the six participating panel members as appropriate. However adherence to this explanation may also cause confusion. According to Botha (1992: 12) the majority of universities in South Africa do not require that the master's dissertation be an original contribution to knowledge, but it should at least contribute towards understanding of a specific problem in the field of research. One can thus infer that most universities do not regard contribution to insight into the understanding of a problem as original. In view of this, these words may have to be deleted from the explanation.

One respondent selected the response "the researcher asks a question that has not been asked or answered before" as the most suitable interpretation of original research, already referred to as a problematic response. From the literature it appears that other disciplines too, are experiencing problems with this term. In an analysis of examiners' reports Landman (1993: 83) found that only 26,7% of examiners reported on this aspect and from the reports it was not clear what criteria were used when positive reference was made to originality. The reports appeared to suggest that a candidate was said to have been original, if he wrote something or did something which is not normally found in theses. Landman therefore recommended that clear guidance should be provided on what is wanted, e.g. have new relationships been established or new facts been discovered? Vorster (1992: 95) describes "*original*" as the student's ability to come up with new and fresh ideas about possible solutions for a problem.

#### Contribution to knowledge

The following interpretations the term *contribution to knowledge* were received from the panel members participating in the first round. "Findings contribute to totally new knowledge on subject; systematic investigation to expand knowledge in discipline; researcher links her research to a conceptual/theoretical framework; knowledge is presented in such a manner that it takes on new meaning". Two responses were selected by the 6 participating panel members of the final round, three each - as best reflecting their interpretation of this term. These are reflected below.

- (1) Knowledge is theory - therefore a contribution to theory means that the researcher links her research to a conceptual/theoretical framework. This can be at any stage of theory development: concept identification, identification of relationships or testing of propositions, etc.
- (2) It constitutes adding something to existing knowledge thus providing new insight/dimensions. This amounts to expanding the scope, extending depth and enhancing quality. The opposite would be solving a particular local problem whereby findings are not generalisable.

Neither of these explanations are specific enough to avoid confusion. They do not state clearly that for which the examiner must actually and specifically look and the first listed explanation raises several questions. For example, how is knowledge expanded if one merely links one's research to a conceptual/framework? Must one not come up with something new? Is knowledge a synonym for theory? The second explanation provides more direction, but does not provide a specific referent, such as to expand the scope and extend the depth of what?

It may be useful to pay attention to Lombard's description of 'making a contribution'. According to Lombard (1992: 37) the following examples would all indicate a contribution to science.

- when new or improved evidence is presented for supporting or disproving existing concepts, theories and models;
- when a new or improved methodology for research is furnished with regard to both the subject of investigation and the paradigm of its understanding;

- when the subject and the topic are analysed by new or improved procedures which are derived from new paradigms of understanding and new procedures of investigation;
- when new or improved concepts or theories are postulated on the topic. Landman (1992: 85) suggests that the examiners ask "In what way did this study expand knowledge of the field or provide new insights?" - has this been clearly indicated?, while Vorster (1992: 95) states that the student makes a contribution if he/she offers his/her own solution to the problem under discussion.

#### Ability to do independent research

Interpretations of this term were very divergent as the following excerpts indicate "to initiate and complete research with no support from other; to go through the whole research process only with the assistance of the supervisor; implementing the steps of the research process; taking the initiative and responsibility of undertaking research either alone or as a leader; to plan and execute research and interpret findings individually".

As the terms had to be considered within the contexts of post-graduate studies and supervisors/promoters are always appointed for such study it would be impossible to give no support to the student.

The following two interpretations were accepted by the six participating panel members as the most appropriate ones for reflecting their viewpoint. The first was selected by five participants and the last one by one.

- (1) Being able to implement the research process and complete the research study with the assistance of a supervisor.
- (2) A level of performance whereby a

person is capable of taking the initiative and responsibility of undertaking acceptable research either alone or as leader of a team of researchers.

It is difficult to determine how examiners would judge "ability to do independent research" on the basis of these interpretations. What criteria need to be considered? None are indicated. Landman (1993: 84) experienced similar problems in his analysis of examiners reports. Only 46% of his sample of examiners of dissertations and 28,3% of examiners of theses included comments on this aspect in their reports and no criteria could be identified from the comments made. Landman therefore raises the question whether the external examiner is really in a position to comment on this aspect. Is it not really only the supervisor/promoter who will know to what extent the student designed and conducted the study independently? He adds, however, that certain content specific to independent research should be evaluated namely *balance, rational action and accountability*.

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