Research in home economics: The need for interdisciplinary research in an interdisciplinary subject

Donna Pendergast

Introduction
Home economics has been on the timetable of Australian students, particularly female students, for well over a century. It has been a component in the education of many generations of students in many countries of the world (Logan, 1981). During this time there have been major changes to the content, processes, skills, outcomes and value of the subject, but there is little research which goes beyond merely presenting chronological histories of the field during these massive changes. Indeed research in and about home economics theory is virtually non-existent - what little that can be located has typically focused on the question of definition, and has generally been carried out by those within the field; researchers outside of home economics largely ignore its existence. The implications of this have been profound, as Thompson (1995:53) has pointed out, "home economists worldwide have worked under incredible pressure to maintain their discipline. This is not a local but an international phenomenon". At least a part of this scenario can be attributed to the real void in research which potentially examines and theorises the field of study, particularly in the Australian setting (Pendergast, 1991; 1992; 1995).

This paper argues that more emphasis should be placed on initiating interdisciplinary research, given that home economics is an interdisciplinary field of study focused upon disciplines and subdisciplines which result in the interdisciplinary benefits of the field. Indeed, such insular research, while contributing to the disciplinary knowledge base, has the potential to destroy home economics. As Becher (1990:333) warns:

...what are variously described as segments, subdisciplines, specialisms, schools, sects and the like, form their own counter-cultures which may press against the overall culture of the discipline of which they form part, and may thus seem to threaten its unity.

The purpose of this paper then, is to:
1. outline the concept of interdisciplinarity, relating it to home economics;
2. compare quantitative and qualitative research methodologies which characterise disciplines; and
3. draw conclusions and make recommendations regarding research in home economics.

1. Outline the concept of interdisciplinarity, relating it to home economics
The question of whether home economics is a discipline or a field of study which is interdisciplinary in nature has long been argued within the profession. There is no doubt that home economics draws upon a range of individually recognised disciplines, including pure sciences such as biology, chemistry and physics; and social sciences, including sociology, psychology and human development and relationships. It is the collaboration of these disciplines which result in home economics - so is home economics a unique discipline or an interdisciplinary field of study? It is my view that home economics is composed of multiple disciplines, each with their own characteristics, and that home economists bring about a unique position through an interdisciplinary linkage, a position supported by fellow home economists (Bobbitt, 1993).

Newell & Green (1982) explain that disciplines are variously characterised by their subject matter, their method, their perspective, and/or the questions they ask. They go on to define interdisciplinary studies as "inquiries which critically draw upon two or more disciplines and
which lead to an integration of disciplinary insights” (Newell & Green, 1982:24). This is supported by Vaideanu (1987:494) who explains the meaning of interdisciplinarity as:

...the encounter and cooperation of two or more disciplines, each of which brings with it, at the level of theory or of empirical research, its own conceptual approaches, ways of defining problems, and research methods.

An assumption underlying this paper then is that home economics is interdisciplinary in nature, and so brings with it the characteristics of individual disciplines, including forms of research and theory. In particular, the aspect around which this paper is focused is the question of research in the field of home economics. The emphasis on research in recent years has been towards specialisation by disciplinary base or subject matter area in order to focus on problems of manageable size and these are typically characterised by a dominant research paradigm. For example, the sciences of nutrition, textiles and food have a research base which historically reflects the positivist paradigm, quantitative methodologies, and the empirical sciences. On the other hand, the disciplines that deal with inter/intra-personal and family relationships, sociocultural and aesthetic environments, and psychosocial development historically have a research base that characterises phenomenologies associated with interpretive sciences (Bobbitt, 1993). This is problematic for home economics in that ideally “interdisciplinary” research should be undertaken in interdisciplinary fields of study and therefore a variety of research methodologies should be utilised collaboratively. Most of the research called interdisciplinary by home economists is a cooperative effort with one or more scientists in the core disciplines (Horn, 1993), with a neglect of the connections and overlaps that ought to be, and could be, made among the various specialisations of the field. This is shortsighted in a field that typically deals with issues that, as Horn (1993) explains, do not fit conveniently into narrow categories or disciplines.

Vincenti (1990) suggests that the major reason why interdisciplinary approaches to learning, and interdisciplinary research have not gained more attention in home economics is the increased emphasis on scientific research, with its prescribed methodology that atomises knowledge into components in order to control variables, isolate phenomena from their context, and develop generalisations. However, despite there being little research in home economics which is interdisciplinary in nature, there are three factors which have facilitated the move towards interdisciplinarity in the field of education: progress made in scientific research; the potential for new ways of looking at the teaching-learning process; and the evolution of world problems which are typically complex, global and interdependent (Vaideanu, 1987). These three factors also are reflected in home economics – particularly the third point, which emphasises the overlapping problems typifying home economics.

Given that home economics is interdisciplinary in nature, and that the disciplines upon which it is constructed favour certain research paradigms, it is important to understand the differing characteristics and features of the research methodologies. In this way the potential contribution of both qualitative and quantitative research can be appreciated, and the benefits of interdisciplinary research using both paradigms will become apparent. It is important that home economists, located in an interdisciplinary field, recognise the benefits of interdisciplinary research. Indeed, as Vaideanu (1987:489) has suggested “...interdisciplinarity has been regarded as an idea with a great future, a refuge for superficial researchers...”.

2. Compare quantitative and qualitative research methodologies which characterise disciplines.

Research relies on two contrasting paradigms – experimental (normative) and phenomenological (interpretive). The normative approach is “concerned with discovering natural and universal laws regulating and determining individual and social behaviour” (Cohen & Manion, 1985:6). The positivism paradigm is the basis for the quantitative methodologies and the empirical science mode of research. The strength of the quantitative approach depends on how effectively the research questions reflect the reality of the human systems and environments being studied (Bobbitt, 1993). The phenomenological paradigm “emphasises how people differ from inanimate, natural phenomenon, and indeed, from each other” (Cohen & Manion, 1985:6). The mode assumes phenomena can be understood from people’s perceptions of the situation. Its purpose is to understand the perceptions and perspectives of people involved in situations with emphasis on the micro/macro contexts of relationships. Qualitative approaches to study of
humans and their environments permits expanded perceptions which contributes to
greater breadth and depth of study. Research from
a qualitative perspective is based upon an
organismic view; the sum is greater than the parts
(Bobbitt, 1993).

It is the purpose of this section of the paper to
compare and contrast the opposing paradigms of
qualitative and quantitative research, by
considering six distinguishing features of the
research paradigms. In this way, a greater
understanding of the strengths and weaknesses of
the methodologies can be appreciated and the
potential for interdisciplinary with possibly multi-
methodological research is highlighted. The issues
to be addressed are:

(a) definitions/orientations to ‘reality’ and
‘knowledge’;
(b) the kinds of research questions generated;
(c) the conduct of scientific inquiry, in particular
the role of the researcher and the issue of
“control” over the study context;
(d) the issue of “cause” and “effect”;
(e) what counts as “data” and what are
appropriate methods of data collection; and
(f) the issues of “reliability” and “validity” in
research.

(a) Definitions/orientations of reality and
knowledge
Phenomenological and normative approaches to
research contrast on the basis of ontology and
epistemology. According to the Oxford
Dictionary, ontology is the “branch of metaphysics
dealing with the nature of
‘being’; that is, the
‘conception of reality.
Ontology
The normative tradition is that of the realist and
positivist. Research is “directed at analysing the
relationships and regularities between selected
factions...this perspective expresses itself most
forcefully in a search for universal laws which
explain and govern the reality which is being
observed” (Cohen and Manion, 1985:8). Thus
researchers are observers. They do not become
part of the reality quantified, and they aim to
apply their discoveries as generalisations. This is
the concept of nomothetics – the stating of laws.
The ideographic approach – understanding
individual behaviour – is the phenomenological
form of research. The tradition is concerned with...

an understanding of the way in which the
individual creates, modifies and interprets the
world in which he or she finds himself or herself.
The approach now takes on a qualitative as well
as quantitative aspect. (Cohen and Manion,
1985:9)
The approach therefore requires an involvement
with the subjects, so the researcher is able to
identify and interpret the ‘reality’ and ‘knowledge’
The phenomenological approach can therefore be described as nominalist anti-positivist and ideographic.

(b) The kinds of research questions generated

The contrasts in ontology and epistemology between phenomenological and normative research provides a basis for determining the kinds of research questions generated, in conjunction with the linking of methodology with the concept of human nature.

Human beings and their relationships with their environment are different depending upon the paradigms. Determinism, employed by the normative approach, is the human "responding mechanically to his [sic] environment"; they are regarded as "products of the environment...conditioned by external circumstances" (Cohen & Manion, 1985:8). This contrasts with the phenomenological tradition of voluntarism, where people are seen as the initiator of their own actions, rather than the product of their environment. People have a "creative role...creator of his [sic] environment, the controller as opposed to the controlled, the master rather than the marionette" (Cohen & Manion, 1985:8). The emphasis on the particular and the individual, is the ideographic approach.

Philosophical contrasts between experimental and interpretive research will clearly have implications on the kind of research undertaken. In the normative tradition, the approach is that of the positivist:

(i) the methodological procedures of natural science are applied to social science;

(ii) the researcher is an observer of social reality;

(iii) the endpoint of analysis must be expressed as laws or law-like generalisations; and

(iv) the researcher is an analyst or interpreter of his subject matter (Cohen & Manion, 1985:12).

Research questions generated are typically in the form of hypotheses. The normative researcher begins with a theoretical framework from which a hypothesis is developed. They then employ empirical measures, e.g. surveys, experiments, which lead to quantification of predetermined constructs. Deductive reasoning is applied so that through a sequence of formal steps of logic, from general to the particular, a valid conclusion may be deducted for a valid premise. The findings can then be generalised to the relevant population.

The polarity of the phenomenological approach, when considering the kinds of research questions generated is enormous to that of the experimentalist. The anti-positivist, ideographic approach does not begin with a hypothesis. Instead, an inductive method is considered appropriate where interpretive researchers begin with a vague idea or interest, or very general questions in mind. This leads to collection of data, and the results are driven by the data collected. Findings are subjective, and techniques of collection may include accounts, participant observation and personal constructs. The implications of the two approaches to research are enormous, as it gives such scope for the kind of research questions asked – it is the issue to be researched which will dictate the appropriate method.

(c) The conduct of scientific inquiry, in particular, the role of the researcher and the issue of control over the study context

The scientific method has historically been employed in the fields of pure science, its aim to identify cause and effect situations. Research and science are concerned with the discovery of facts, but in science, the facts are collected to test a theory. This is the case in normative - but not in interpretive research (Borg & Gall, 1983). The normative stance can be paralleled to the scientific method, viz.:  

1. selection and identification of a problem;

2. execution of research procedure;

3. analysis of data; and

4. drawing and stating conclusions. (Gay, 1976:6)

Techniques employed are associated with the positivist model - eliciting responses to predetermined questions or hypothesis; recording measurements, describing phenomena and performing experiments. As Cohen & Manion clearly state: "It is the scientific method that has become the basis of the normative approaches to the study of man [sic] which seek to explain his [sic] behaviour in society."

The philosophical perspective of the normative researcher mirrors that of the scientist - an ambition to determine global laws by establishing causal links. Each of the elements of traditional scientific inquiry are evident and are employed in the experimental approach - explanation, prediction and control. This approach to research is often criticised, accused of attempting to explain human behaviour in mechanistic terms of
operating in the way we do as a result of internal and/or external causes. Critics highlight the lack of acceptance the normative researchers have of the ability for people to interpret their experiences and consequently, the findings are said to be so restricted, simplified and controlled as to end up with data which is so out of touch with reality it is irrelevant. Typical procedure for experimental research is to consider the theory, hypothesise about relationships perhaps suggesting cause-and-effect or causal links, and find data which either supports or disproves the hypotheses. This method of scientific inquiry leads to questions about the closed nature of the researcher:

In normative studies, data are always data for some hypothesis or other, if they are what is given then the researcher must have hypotheses to be eligible to receive them. Data in interpretive studies, on the other hand, are the source of hypotheses, of interpretation; they precede any theorising or explanation which takes place.

(Cohen & Manion, 1985:27)

Thus, the interpretive philosophical approach is where data generates relationships and interpretation. Phenomenological research is inductive, in stark contrast to the deductive approach of the experimentalist. Hence, the scientific method is not applied in its traditional form to interpretive research methods.

The interpretive approach tackles research by studying people in their natural environment, in contrast to experimental research which operates under the strict confines of the controlled scientific method. The basic premise underlying the interpretive model is:

1. The naturalistic-ecological hypothesis: i.e. research must occur in the natural setting or similar if generalisations are to occur.

2. The qualitative - phenomenological hypothesis, i.e. the researcher cannot understand the framework within which the subjects (participants) interpret their thoughts, actions and feelings unless they use interpretive methods.

(Wilson, 1977:47)

The interpretive and normative positions to the conduct of scientific inquiry are at opposing stances. The experimental method adopts scientific inquiry as its base, while phenomenologists consider the scientific approach to be directing, objective and setting a priori limitations to the point of being unable to reflect true events. The aim of the normative approach is to determine global laws - the realism approach while the interpretive or nominal view considers each situation to be unique, situation specific and therefore inappropriate to employ scientific inquiry.

Within this framework, what of the role of the researcher? Depending on the particular paradigm, whether normative or interpretive, the researcher will identify certain issues of interest and ignore others; they will ask certain questions and not others; they will adopt certain research methods rather than others; and they will show a preference for certain kinds of analysis, explanation and theory.

The role of the normative researcher is to collect data with attitudes, values, skills and objectives derived from the positivistic model. They do not become involved in the situation, are detached, objective, neutral and conceptual. Their goal is to consider theories, determine hypotheses and slot issues into "straight-jacket social reality" (Cohen & Manion, 1985:27). The researcher is at no time "involved" in the issues being studied, the activity is retrospective and requires the establishment of causal links. The role of the interpretive researcher contrasts sharply with that of the normative researcher. They favour "an inner view of social reality and are therefore much more involved; an involvement which frequently demands participation as an ongoing member of the group they are studying" (Cohen & Manion, 1985:28).

Phenomenologists look for explanations and patterns in collected data. Observation is typically employed as a tool for the interpretive researcher, of which there are two principal types: participant observation, and non-participant observation. Phenomenologists use their experiences in the study as data. They become a part of the research. According to Wilson, who summarises the process as a series of issues: entry and establishment of researcher role; data collection procedures; objectivity and analysis of data; the role of the researcher determines the success of each of these facets, viz.:

...the participants must come to trust and value the observer enough to be willing to share intimate thoughts with him (sic) and answer his (sic) endless questions. (Wilson, 1977:87)

An example of the role of researcher in phenomenological research is reported by Sullivan, Queen & Patrick, who carried out a participant-observation study to gain an insight into the motivations and attitudes of training personnel in a Military Training Program. The
researchers role was covert. He enlisted as a basic trainee - his identity, mission and role as a researcher unknown to everyone except the investigator. The extent of the role involved minor surgery; loss of 35 pounds, training on reporting techniques and a long-term commitment to the study (Sullivan et al, 1970). Such extremes in interpretive research are rare, but illustrates the degree phenomenologists will extend themselves to attain subjectivity, as opposed to the objectivist normative approach.

Problems associated with the researchers role in interpretive research may include: bias, loss of identity, the need to constantly review and monitor reactions, remaining distant enough to test emerging hypotheses - none of which are encountered in the role of the experimentalist. However, perhaps the greatest benefit is the possibility of eliciting information not accessible to researchers using experimental methods.

The issue of 'control' illustrates how polar normative and interpretive research is. Control is one of the critical aspects of scientific inquiry - by controlling, the scientist is able to determine association and ultimately gain control (Borg & Gall, 1983:21). The normative researcher particularly aims to control the situation and the procedure. Phenomenologists reject the concept of controlling a situation, and few employ procedural control. Experimental researchers deliberately control events and conditions so as not to cloud variables being researched. Control is used as a factor for establishing validity - high control links with high validity, and converse. One method of control is the addition of the control group - a reference group which assists in validating results. In this way, the control group becomes the basis for comparison, unaffected by variables. The degree of control in experimentalist approaches is on a continuum-dependent upon the variables, methodology, etc.

The phenomenological stance on control contrasts with this normative approach. Interpretive researchers oppose situational control, suggesting this nullifies their study. In some cases, they permit procedural control, e.g. structured/unstructured questions; natural/artifical settings. Because of the nature of most interpretive research, control may actually become a constraint on reliability. As Le Compte & Goetz (1982:32) explain:

The type of data and the research process itself may preclude the use of standardised controls so essential in experimental research.

Accommodating the structures of experimental control requires manipulation of phenomena which distorts the natural occurrence.

Another secondary aspect of control contrast between normative and interpretive methods is the degree of control the researcher has over their study. The normative approach sets out with definite aims, is tightly structured, rigid. All aspects are controlled, to the point where the researcher has control, and is set in a rigid, inflexible framework. In comparison, the interpretive researcher allows the situation to direct them, directional control is enormous. Phenomenologists have the ability to adjust and adapt because of this flexible approach.

(d) The issue of cause and effect

The concept of cause and effect is defined by Cohen & Manion as "determinism". It is the belief that events have causes, and these causal links can be determined and isolated and be shown to have definite implications, or effects on other factors. The issue of establishing cause and effect is not as straight forward as one may anticipate:

...a phenomenon invariably occurs as a result of multiple causation and the problem of establishing the actual cause of a particular phenomenon, especially in the behavioural sciences, is virtually insoluble. Even in rigorous experimental situations where variables can be manipulated it is impossible to control all the factors in such a way as to be able to identify conclusively the causal factor or factors. (Cohen & Manion, 1985:19)

To overcome this difficulty, the concept of probability to causation and correlation is recognised and taken into consideration human limitations and practical difficulties in carrying out research. Mouly clearly states: "science can only be approximate and continue to function on a probabilistic basis" (Cohen & Manion, 1982:19). Thus, in my discussion of cause-and-effect, the lesser causal links like correlation are cause-and-effect situations, but of lesser intensity, i.e. cause-and-effect from a continuum point of view.

Normative researchers have as their underlying philosophy the idea of cause-and-effect. It is the basis of scientific inquiry. The experimental approach is to identify the extent to which a specific cause(s) leads to specific effect(s). This is measured by varying means, and there is a continuum of acceptable causal links. After such
links are found, to confirm cause and effect, experimental research should be applied. Within the normative paradigm – the cause-and-effect philosophy is dominant, and the methodology employed establishes the degree of linkage, on the cause-and-effect continuum.

In distinct contrast, the phenomenological researcher avoids the manipulation of variables to establish causal significance. They reject the notion of cause-and-effect, which has global applications to specified populations. Their aim is to observe, probe deeply and analyze from an ideographic, not nomothetic stance. This subjective approach negates the assumption that people behave in a certain manner as a consequence of preceding or future events, thus a cause-and-effect linkage is invalid.

The phenomenological paradigm makes links during and after the collection of data, in contrast to the experimentalists, who begin with clearly defined hypotheses, which aim to nullify or support cause-and-effect relationships. The interpretive paradigm argues on the grounds of being nominalist or idealist – that is, that people interpret the world in which they are in – and there is no universal law of human society or conduct within it. For example, Davies (1980:258), in her study of school children's social interactions, began with no preconceived expectations as to outcomes. Her aim was to:

...get inside the children's world and to understand it from their point of view. I have drawn together some insights into the nature of adult-child interactions which developed during the course of my study.

Such is typical of research undertaken in the phenomenological view – there are no cause-and-effect hypotheses or deductions. In contrast, the experimental approach by Welch, Anderson & Harris (1982:145) begins with the premise:

This study aims to examine the proportion of variance in mathematics achievement attributable to differences in number of semesters of mathematics studied.

The methodology incorporated a statistical procedure for relating variations in a set of predictor variables to variation in a criterion variable. Thus, this typical normative example began with a need to either support or nullify the cause-and-effect relationship that was already assumed to exist, that is, based upon external reality.

Both paradigms of research play a vital role in research, based on their differences in cause-and-effect, depending upon the particular aspect being researched.

(c) What counts as 'data' and what are appropriate methods of 'data collection'?

The aim of all research is to gain data which will be of value to the researcher. Normative and phenomenological paradigms differ with regard to data and methodology in data collection. What counts as data in interpretive research is described by Wilson (1977) as being "multi-modal" and he suggests each of the following are relevant kinds of data: form and content of verbal interactions between participants; form and content of verbal interactions with the researcher; non-verbal behaviour; patterns of action and non-action; traces, archival records, artefacts, documents.

This is not to suggest that all methods of data collection in interpretive research will utilize each of these forms of data, but they are all acceptable forms of data.

In direct contrast to this, is the concept of data and appropriate methods of data collection used for normative research. Since it is the aim of experimental research to collect data which establishes relationships between factors by considering predetermined hypotheses, the normative researcher is not concerned with any data except that which is specific to the hypotheses, Data is therefore limited to that required to establish causal relationships. All other data is considered to be superfluous and irrelevant to the study. As Cohen & Manion (1985:27) explain:

In normative studies, data are always data for some hypothesis or other; if they are what is given, then the researcher must have hypothesis to be eligible to receive them. Data in interpretive studies, on the other hand, are the source of hypotheses of interpretation, they precede any theorising or explanation that takes place.

Phenomenologists consider that qualitative data – which considers all factors, including interpretations of the researcher – is far more representative than quantitative data, which links only defined variables, to the exclusion of all others. The normative paradigm casts doubt on the validity and applicability of qualitative research data, suggesting it is "synonymous with journalistic reporting and anecdotal or impressionistic storytelling" (Gay, 1976).
Specific methods of data collection appropriate to the normative researcher include experiment/quasi-experiment; survey; interview; observation; document analysis. These can be undertaken in the varying normative approaches including experimentation, quasi-experimentation, longitudinal studies, cross-sectional studies, ex-post-facto studies. Data can be recorded by questionnaire, video or audio tape, field notes, coding sheets, drawings, test scores, etc.

Specific methods of data collection preferred by phenomenologists include interviews, observation, document analysis and accounts. Data is recorded on questionnaires, video/audio tapes, field notes, coding sheets, drawings, etc. Clearly, the actual "tools" of research overlap the normative and phenomenological paradigms.

(f) The issues of reliability and validity

These are key issues of research - is it reliable, and is it valid? Reliability is split into two more defined areas - internal reliability and external reliability.

Reliability

External reliability addresses the issue of whether independent researchers would discover the same phenomena or generate the same constructs in the same or similar settings. Internal reliability refers to the degree to which other researchers, given a set of previously generated constructs, would match them with the date in the same way as did the original researcher. (Le Compte and Goetz, 1982:32)

In a nutshell, reliability refers to the extent to which studies can be replicated.

When considering the experimental paradigm of research, reliability is seen as a quantifiable measure. Reliability can be determined by calculating reliability coefficients which reflect the extent to which research is free of "error variance".

Reliability coefficients vary between values of 0.00 and 1.00, with 1.00 indicating high reliability and 0.00 indicating low reliability. Because of the quantitative nature of experimental research, it is possible to apply reliability tests with ease. This reflects the internal reliability of predetermined variables, external reliability will be high because the same variables can be used to replicate the study.

Reliability in phenomenological research is, by contrast, an imprecise measure. In fact, as Le Compte & Goetz (1982:87) explain:

A common criticism directed to so-called qualitative investigation is that it fails to adhere to canons of reliability and validity...The results of ethnographic research often are regarded as unreliable and lacking validity and generalised.

Wilson (1977) suggests that some researchers consider interpretive research to be nothing more than "data polluted with the observer's subjective bias", and therefore to lack internal reliability. Le Compte and Goetz (1982) go on to explain that it is difficult to replicate precise situations, and receive identical results because of the uniqueness of each study. This of course, poses a serious threat to external reliability.

Validity

Validity - the degree of accuracy of scientific findings - is the final comparison between the research traditions. Establishing validity requires determining the extent to which conclusions effectively represent empirical reality and assessing whether constructs devised by researchers represent or measure the categories of human experience that occur.

Cook & Campbell (1975:223) identify four kinds of validity relevant to normative traditions:

2. Internal validity: the validity of conclusions drawn about whether a demonstrated statistical relationship implies cause, i.e. do the experimental treatments in fact make a difference.
3. Construct validity: the validity with which cause-and-effect operations are labelled in theory-relevant or generalizable terms.
4. External validity: the validity with which a causal relationship can be generalised across persons, settings and times.

External and internal validity are considered to be the more important forms, so our attention will be focussed there. As stated, internal validity refers to the extent to which scientific observations and measurements are authentic representations of some reality. Estimating threats to internal validity is a deductive process. It is only when each of the threats to internal validity are ruled out, that confident conclusions about whether a relationship is causal, can be made. Threats to external validity - the degree to which
representations may be compared legitimately across groups — are likely to limit the degree to which generalisations can be made from particular experimental conditions to other populations or settings. To be externally valid then, experimental research must have results which are generalisable beyond the confines of the particular experiment.

The relationship between internal and external validity within the normative framework is “lopsided”:

Without internal validity an experiment cannot possibly be externally valid. But the converse does not necessarily follow: an internally valid experiment may or may not have external validity. It follows then that the way to good experimentation...lies in maximising both internal and external validity. (Cohen & Manion, 1985:167)

The phenomenological paradigm also considers the issues of internal and external validity. Some researchers suggest that validity may be the major strength of the phenomenological approaches. They explain that through methods of data collection and analysis, internal validity are authentic representations of reality. In contrast, normative traditions may actually be jeopardising internal validity by controlling and limiting the experimentation to the extent common in such approaches. Like the normative approach, interpretive researchers must estimate threats to internal validity in a deductive manner; in addition to an inductive manner, for sources of bias and contamination (Le Compte & Goetz, 1982).

External validity — the generalisation of findings across populations — is not the aim of most phenomenological research. For those researchers hoping to establish external validity, the process is difficult, but not impossible. As Le Compte & Goetz (1982) explain, external validity depends on the identification and description of those characteristics of phenomena salient for comparison with other, similar types. This statement in itself, illustrates the lack of credibility of external validity in many forms of phenomenological studies. Thus, it is relatively difficult and generally undesirable to establish external validity in phenomenological research.

3. Draw conclusions and make recommendations regarding research in home economics

The research traditions of phenomenological and experimental study provide differing perspectives and opportunities for research. As Burgess (1985:3) explains “it is not a question of the superiority of one method over another, but the appropriateness of a method of investigation for a particular research problem”. This can be demonstrated in research undertaken in the field of home economics — some related to specific disciplines, others interdisciplinary in nature. The following several paragraphs outline some home economics research with direct relevance to Queensland.

Eiby (1989) undertook research to determine the differences between students who had studied home economics and those who had not in terms of students’ perceptions of their competencies in life skills. Through the use of statistical (quantitative) methodology, Eiby found that home economics students have enhanced perceptions of their abilities related to life skills compared with students with no home economics education.

Henry (1989; 1991; 1995) investigated the many interpretations of home economics by applying the conceptual foundation of Habermas’s Theory of Cognitive Interests utilising qualitative methodology. The framework was utilised in order to determine how home economics could be interpreted from a technical, practical and an emancipatory orientation; and how particular approaches to the field could transfer it to the more desirable emancipatory approach. Henry has recently completed a doctoral thesis which proposes a possible definition of wellbeing — a descriptor commonly used in relation to home economics. Two theoretical positions have been considered — how critical theorists (and particularly Jurgen Habermas) define wellbeing and how feminists view the concept. The two theoretical positions have been juxtaposed in an attempt to "establish a definition for well-being that might provide a way forward for the latter part of the twentieth century" (Henry, 1995:2).

Another item of research informing home economics education in Queensland was commissioned and undertaken by the Board of Senior Secondary School Studies in readiness for a revision of the Senior Syllabus in Home Economics (BSSSS, 1989). This research collected data from many of the stakeholders of home economics education including students, teachers, principals and guidance officers and provided a comprehensive and often contradictory version of...
the vocational and other benefits of the subject – reasons for choosing; how the subject has measured up to expectations; strengths and weaknesses, and so on. The methodology used was a quantitative approach.

A Project of National Significance in the Education of Girls, funded by the Department of Employment, Education and Training was undertaken in Western Australia. Smit has examined the potential of the home economics curriculum for broadening girls’ post-school options (1991:5). This research utilised a combination of qualitative and quantitative methodologies. Home economics was selected for investigation because of the existence of gender issues associated with the curriculum area which had not previously been the focus of gender work. The most significant finding of the project was that home economics can improve girls’ post-school options. Emerging from this, Kenway (1993) has explored the notion of home economics as an inclusive curriculum, focusing on the possible contribution of home economics to the education of males and females, in addition to its role in enhancing girls’ futures. Kenway emphasises the need for demythologising patriarchally approved structures of society, and suggests there is a need to undertake this challenge through the development of strategies to revalue traditionally undervalued outcomes (Kenway, 1993:9).

In my own previous work (Pendergast, 1991; 1992; 1995) I applied feminist poststructural theory to a discourse analysis of transcriptions of audiotapes of deliberations from a state conference of home economists. This utilised a combination of qualitative and quantitative methodologies. The conference was held to discuss the future development of the senior syllabus of home economics which was (and still is), under review. I identified three speaking positions used by home economists. Each was located in the marginal discourse and offered subjectivities which were disempowered through patriarchy. Other research I have undertaken with Burke (Burke & Pendergast, in press) reports on the current thinking and attitudes of home economics tertiary students, secondary home economics teachers and graduate home economics professionals in industry toward the home economics profession and the professional bodies which represent it – a qualitative study. Findings of this research indicated that there were several major issues regarding the nature, purpose and direction of home economics related to relevance and application, diversity, and the need for greater professionalism.

There is, of course broad research in specific educational and cultural disciplines which have informed the field of home economics, though not with research specific to the field. Some of the more notable among the theorists include Bernstein (1987); Bigum & Green (1993); Davies (1989, 1992); Fraser (1989); Habermas (1974); Limerick (1991); Reiger (1987, 1990, 1991); Waring (1989); Watts (1992); Wearing (1989); Weedon (1987). The areas of expertise include: technology education, feminism, critical theory, social and political theory, gender and social justice, and each typically utilise research paradigms which reflect the values of the discipline.

It is important to recognise that both approaches to research are legitimate mechanisms in theory development, application and testing and for contributing to a more holistic, detailed framework for understanding humans and their environmental interactions; particularly when the character of home economics as interdisciplinary is acknowledged. Qualitative methods can benefit from quantitative approaches, and together they can provide a depth of perception or a binocular view that neither can provide alone. By acknowledging the value of qualitative and quantitative research, home economists can make contributions toward meaningful data interpretation by “demythologising” the quantitative-qualitative dichotomy – as Bobbitt (1993) suggests, a holistic profession requires holistic approaches, including research. There is no doubt that research will be considerably enriched as qualitative and quantitative researchers learn to integrate their approaches.

References
Research in home economics


