Teacher curriculum decision-making in senior physical education

Gregory Reddan - Griffith University, Gold Coast, Queensland, Australia

This study reports on teacher curriculum decision-making and evaluates Smith's (1983) model of 'perceived decision-making space'. Frame theory has provided a framework for the conceptualization of the study and the analysis of data produced through teacher interviews. The study indicates Smith's model has considerable value as a blueprint for researchers, thereby simplifying the process of analysis and serving as a helpful aid for those uncertain of the processes involved. The model is generic in nature and can be applied to all learning areas and levels of education, thereby opening many opportunities for research for those interested in the factors which influence teacher decision-making.

Introduction
Curriculum decision-making is a complex activity involving many groups with vested interests, however some individuals play a greater role in the decision-making process. According to Klein (1991, p.24), "whoever makes the decisions has great power over what students will and will not learn at school". Although curriculum decision-making is part of their professional role, teachers may be affected in the procedure by a number of interested parties: students, principals, parents, supervisors, educational authorities, as well as prominent members of the community.

Purpose of the Study
This curriculum inquiry investigated the factors affecting the decision-making of four teachers in two secondary schools in Queensland regarding the development of a school work programme from the Senior Physical Education Syllabus. Smith's (1983) notion of 'perceived decision-making space' and his model based on frame theory have been applied in the analysis of teacher decision-making. The purpose of this research was to determine the particular factors, which either facilitated or restricted teacher decision-making in the general implementation of the Syllabus, as it became available to all Queensland secondary schools. Senior Physical Education is a 'Board' course, which students can select as an examinable subject for the Senior Certificate.

Research Questions
The inquiry utilised Smith's model for the analysis of teacher decision-making in focusing upon the following two questions:

a) Which factors affected teacher decision-making in the development of school work programmes from the Senior Physical Education Syllabus for the particular teachers in this research?

b) Of what value is Smith's model for the analysis of teacher decision-making in relation to the implementation of a centrally distributed syllabus?

Significance of the Study
In research to date, there do not appear to have been any studies that have applied Smith's model to analyse teacher decision-making, particularly as teachers interpret a syllabus and seek to develop a school work programme. The value of a syllabus is related to the degree to which it is successfully implemented in the school situation. This study is significant in that it identifies particular aspects that may affect the successful implementation of this particular syllabus and future syllabi produced by the Queensland Studies Authority and other similar educational institutions. The findings may affect both student learning and teacher satisfaction and thus have the potential to significantly influence the teaching-learning process.
Frame Theory and Teacher Decision-Making Space

Frame theory was first promoted by Bernstein (1971) to describe the strength of the boundary between what teachers were or were not able to teach in a school system. Smith (1983, p.233) indicated that framing "specifically referred to the degree to which individual teachers were free to select, organise, sequence, and pace knowledge in a curriculum". However, Bernstein's (1971) concept of frame made no reference to the size and nature of a teacher's operational space whilst making such curriculum decisions. Frame was perceived by the individual teacher as a concept of constraint and direction.

Dahloff (1971, pp.71-91) extended this concept of frame and developed the notion of 'frame factors', which were characteristics of the environment in which instruction was going to occur that were directly under the control of the school authorities of that locale, rather than the individual teacher (Smith, 1983). Dahloff (1971) included as frame factors such considerations as: class size, general structure and objectives of the syllabus, the length of a school year, and the location of school buildings within the community. However, his work lacked a clear conceptual structure, focusing only on factors at a system or state level.

The Concept of Perceived Curriculum Decision-Making Space

Smith (1983) suggested that individual teachers create their personal operational space, which is comprised of a number of possible options. He considered decision-making space, for each particular teacher, to be a perceptually-defined space. Smith (1983) indicated that the concept of 'perceived curriculum decision-making space' extends the concept of frame in five distinct ways:

• It increases the range of decisions that can be framed to all curriculum decisions made by individual teachers;
• It emphasises the nature and structure of the operational space defined by each frame, more than the frame itself;
• It attempts to suggest the factors responsible for the size of the frame and the frame space, leading to considering the relationship between the frame as a boundary, and the space enclosed by the boundary;
• It seeks to demonstrate the manner in which the size and shape of the frame spaces may be altered depending upon the strength of the frame; and
• Finally, and most importantly, it asserts that any notion of frame or frame space depends entirely upon the perceptions of the individual teacher (Smith, 1983:237).

Smith (1983, p.246) indicated "the concept of perceived curriculum decision-making space provides the opportunity to develop a systematic and coherent conceptual framework for the description and analysis of the limits to individual teachers' curriculum decision-making". This framework has been utilized as the basis for the analysis of teacher decision-making in the present study. The specific features of the framework have been presented by Smith and Lovat (2003), who suggested five sets of factors appear to be important in defining a teacher's curriculum decision-making space. For each set, the number of options available creates a 'frame space' and together the overlapping frames produce a dynamic decision-making space for each individual teacher. Smith and Lovat (2003) termed these five frames that comprise a teacher's perceived decision-making space:

• the system frame;
• the school/institution frame;
• the faculty/subject department frame;
• the learners frame; and
• the teacher-self frame.

The system frame refers to the number of decisions that have already been determined and promulgated by the syllabi, curriculum documents and policies of the education system in which they work. Teachers generally perceive these documents and policies as restricting their decision options relating to the organisation and evaluation of curricula. The school/institution frame usually involves the organisation of classes and resources, the organisation and structure of the school curriculum and timetable, and assessment and evaluation practices. Teachers usually perceive restrictions of their decision options in response to the time demands of the system frame to accomplish the tasks required. Decisions by colleagues in the same subject area or by faculty heads can restrict a teacher's decision-making space. Such decisions may be made in response to aspects of the system or school frame, however the evidence suggests that the frames of learner and teacher-self are most influential in the selection of learner experiences (Smith & Lovat, 2003).

Factors in the Selection of Study Schools and Teachers

The number of schools and teachers selected for the study was a function of the ability of the researcher to successfully complete the research project within time restraints. Considering these restraints and the amount of data that could be expected, it was decided to select two schools that were implementing the syllabus in Year 11. The two schools were 'separated' geographically - one school was a large co-educational school on the Gold Coast, whilst the other was an independent boys' high school located in Brisbane. There were two classes, with separate teachers, involved in the teaching of Senior Physical Education at each school, providing four study teachers, including both heads of department. All four teachers had considerable experience as they had been teaching for at least ten years, with the two heads of department having more than twenty years experience and considerable involvement in curriculum planning and development. It was hoped that this would produce a data-base that was sufficient to determine the frames or frame factors that affected teacher decision-making associated with the implementation of the new syllabus.

Outline of Methodological Framework

The study adopted most of the perspectives of the ethno-graphic research tradition, excluding observation, with the majority of the data being collected through a semi-structured interview situation, supported by an examination of written documents (Smith, 1978). Smith's (1983) model of curriculum decision-making was then applied, combined with a 'grounded theory' approach (Glaser & Strauss, 1967), to describe and analyse the teachers' curriculum decision-making behaviour. The interviews carried out in this study are best categorized as focused interviews. An interview guide or schedule was developed around a list of
topics without fixed wording or fixed ordering of questions.

Document Analysis

To further provide validity in the study through triangulation of different methods of collecting data, specific documents have been analysed. These documents include:

- the Evaluation of the Senior Physical Education course (1995), produced by the Board of Senior Secondary School Studies, Queensland, at the end of the Trial period;
- the Evaluation of the Senior Physical Education course (1998), produced by the Board of Senior Secondary School Studies, Queensland, at the end of the Pilot period; and
- the Senior Physical Education work programs of the two study schools. (A work program is the school's plan of how the course will be delivered and assessed based on the individual school and its students - Queensland Studies Authority, 2004.)

Findings and Discussion

The research has considered and responded to the research questions and the following statements summarise the findings gathered from the interview data:

1. Frames and frame factors affecting teacher decision-making in the development of school work programs from the Senior Physical Education Syllabus

This research found that teachers' approaches to decision-making were very similar to those identified in Smith's study of teacher thinking and planning. The learners' frame and the teacher-self frame had the most influence on teacher decision-making in Smith's study. The responses from teachers in the present study indicate that the learners' frame, the teacher-self frame and the school frame were perceived as most influential in either restricting or facilitating their decision-making in the development of school work programs from the Senior Physical Education Syllabus.

a) The Learners' Frame

The four teachers in this study indicated that the individual class (learners') frame was significant in influencing their decision-making. Responses from the teachers in relation to each of the three frame factors emphasized that the students were the main focus of teacher planning and decision-making in relation to the development of school work programs. Teachers indicated that this frame was important in their decision-making in regard to the selection of topics, concepts, skills and resources. They designed learning experiences with the particular learners in mind, utilising strategies that were learner-centred. Teacher statements frequently referred to student-related aspects such as enjoyment, success, equity, skill development, relevance and satisfaction, providing evidence of teachers' concerns for effective learning by their students. Teachers suggested that the consideration of learners was significant when they organised, planned, sequenced and paced learning experiences for their students. This frame factor was perceived by the study teachers to provide direction in their planning, rather than restrict their decision-making.

b) The Teacher-Self Frame

An important finding of the present research was the degree of restriction perceived by the teachers resulting from the lack of in-service training. Three of the teachers suggested that the in-service training was inadequate, with several commenting on the difficulties faced by inexperienced teachers in the general implementation of the Syllabus. The study teachers commonly agreed that more lead-in time was required for teachers to fully absorb the implications of the new Syllabus before they attempted to construct a school work program. Teachers indicated that the integrated nature of the new Syllabus required the development of a greater variety of strategies to teach the selected subject material. Thus, teachers perceived themselves as more involved in the curriculum decision-making processes and were required to use higher order thinking as they attempted to integrate the theoretical concepts with the practical activity within a single lesson. Teacher statements tended to reflect the ways in which teachers perceived themselves as teachers. Teaching Senior Physical Education involved an approach that was significantly different to the prior experiences of teachers, with the application of the principle of integration appearing to create a heightened perception of the teacher's role in the learning process.

c) The School Frame

The present study differed from Smith's research in that an additional frame, the individual school frame, was perceived by the study teachers as significant in their decision-making. The school frame was generally considered to be important in the decision-making of teachers in this study. Probably the prime reason for this common perception was that all the study teachers were operating at the secondary level. However, the school frame was perceived by the study teachers as being restrictive, rather than providing freedom or direction, as evidenced in the learners' and teacher-self frames. Four frame factors in the school frame were identified as restricting teachers' decisions. Firstly, teachers indicated that their decision-making was influenced by competing pressures from other departments to attract students to particular subjects. Moreover, teachers had to meet student expectations for challenging courses that would contribute positively to their final Year 12 results. Thirdly, teachers indicated that the provision of adequate resources was an important factor in their decision-making. Furthermore, teachers suggested the availability of classrooms and appropriate textbooks affected their decision-making. Finally, interruptions to the school timetable affected teacher decision-making with provision being made for this lost time in the planning of school work programs.

d) The System Frame

The four teachers in the present study suggested that the system frame provided significant decision-making space and did not significantly influence their decision-making. Their responses to the five frame factors indicated that the teachers perceived that they could easily alter the frame space in order to accommodate their particular decisions. Teachers indicated considerable freedom to select the knowledge to be taught in order to meet the needs and
interests of the specific schools and their students. The sequencing of topics provided teachers with significant decision-making space, but most indicated the spiralling principle was a major factor in their decision-making. Year 12 studies were at a greater depth than Year 11 to allow students to realize their potential in both written and practical tasks. Furthermore, teachers were able to enlarge their decision-making space by altering the time spent on different content areas and foci, according to their specific teaching situation. Comments made by teachers suggested that most were adjusting well to Board requirements and were not restricted by the system frame.

e) The Faculty Frame
Teachers in the present study suggested that the faculty frame increased their decision-making space. In particular, the assistant teachers appeared to be content to embrace the curriculum decisions made by the two department heads. These teachers indicated that their decisions were facilitated by the direction suggested by the department head. Teachers at both schools made little mention of any problems associated with common assessment or the sharing of resources. The policies of the department heads in the study were not perceived as decreasing decision-making space. Assistant teachers readily accepted the decisions made by their department head, particularly as they had minimal time available for planning. However, department heads perceived their workload was excessive in the writing of the work program and would have appreciated more assistance to cope with the numerous tasks involved. This frame may have been perceived as more restrictive in schools where more teachers and classes were involved.

f) The Community Frame
In the present study, teachers indicated parents and the school community had minimal influence, but greater consideration was given to the local community, where most of the students resided. Statements indicated that teachers should be aware of the interests of the school community, the local community, and developing sports when they make decisions in relation to the selection of appropriate activities for study in Senior Physical Education. The popularity within the school and local community of the four activities selected for study may have significant effect on the future success of the course.

2. The Value of Smith's Model
Smith claimed that the notion of 'perceived curriculum decision-making space' extended the concept of frame in five distinct ways, as previously mentioned. Each of these claims has been reinforced in the present study. First, the model enabled all curriculum decisions made by individual study teachers to be framed efficiently within the specific frames and frame factors. Second, the nature and structure of the operational space defined by each frame was clearly emphasized in the analysis of teachers' decision-making. Third, the model suggested factors responsible for the size of each frame and frame space in the interpretation of teacher statements. Fourth, the manner in which the size and shape of frame spaces could be altered was identified through the use of the model in the analysis of the data. Finally, it became clear during the analysis that the teachers' perceptions were closely related to the notions of frame and frame space. Study teachers in the same school exhibited different perceptions of frames and the spaces within frames that affected their decision-making.

This study has found that Smith's model provides a coherent, conceptual framework for the description and possible analysis of a teacher's operational decision-making space, thus allowing the significant limits of teacher decision-making to be determined. This operational space is "delineated according to the perception of the decision maker, rather than in some absolute manner" (Smith, 1983:182). The model provides a means of understanding teachers' perceptions of their operational space in a rational manner. The perceptual decision-making space of each teacher or group of teachers indicates the degree of freedom, restraint or direction that is perceived to affect decision-making. These aspects may significantly affect the successful implementation of a new syllabus, particularly if teachers perceive considerable restriction in their decision-making.

Smith's model provides a clear direction for a researcher interested in analysing teacher decision-making. The model has the potential to identify frames and frame factors that may possibly restrict or facilitate the process of decision-making, providing the analyst with the means of logically categorizing interview data to define teachers' perceived decision-making space. The model thereby allows the researcher to determine those frames and frame factors that are influential in teacher decision-making. This knowledge may be of use to those responsible for syllabus development and implementation, both in a specific and general sense. The frames and frame factors presented in Smith's model provide a framework for organizing the variety of factors that affect teacher decision-making. The model can assist in determining the relevant importance of particular frames and frame factors in decision-making, as evidenced in this study. This is of particular significance in identifying those frames and frame factors that restrict teacher decision-making, which may affect the success of general implementation of a syllabus. Furthermore, the model allows for a consideration of the size, as well as the strength, of each teacher's decision-making space.

The model provides a blueprint for the researcher, a set of procedures, which simplifies the process of analysis and serves as a helpful aid for those uncertain of the mechanical aspects involved. The model has considerable value in that it is generic and may be applied to all learning areas and levels of education. It provides an avenue to compare research from different subject areas and levels with the potential to improve the processes of curriculum development and implementation. A possible weakness of the model is the specific prescription of the frames and frame factors. Interviewers need to be fully conversant with all features of the model beforehand so that interview questions can be structured to fit the model in order to ensure appropriate responses are collected as data for analysis. The collection of data that does not fit comfortably into the frames and frame factors established in Smith's model may also cause difficulties for a researcher. However, this situation could be remedied by extending the frames and frame factors identified by Smith or including additional aspects as required to meet the need.
Conclusion

The present study has extended Smith's investigation of frames and frame factors affecting teacher curriculum decision-making. The most important contribution of this study is the evaluation of Smith's model as a means of identifying and interpreting frame factors that affect teacher curriculum decision-making in the implementation of a new syllabus. Factors that have been demonstrated to facilitate teachers' decision-making are likely to result in successful syllabus implementation; conversely, factors that restrict teachers' decision-making tend to make syllabus implementation more difficult. The use of Smith's model enables the educator to determine the particular environment in which the syllabus is likely to flourish and thus describe the 'ecological requirements' of the syllabus. Following such an analysis, modifications of the syllabus may be necessary to ensure a syllabus is successfully implemented and finds its 'ecological niche' (Posner, 1995, p.197). Additional studies of the type reported in this research are necessary to continue the investigation of teacher planning and curriculum decision-making in order to develop a more detailed understanding of teachers' curriculum practices.

The context in which teachers work has considerable effect on the particular frames that are deemed to be significant or influential in their curriculum decision-making. Different teaching contexts may give rise to other frames being perceived as important by teachers. Moreover, future research using Smith's model needs to be carried out on syllabi from other subject areas in the general implementation phase to compare the effectiveness of the model for analyzing teacher decision-making. Finally, the model could also be used to analyze teacher decision-making to determine if changes in the process occurred at different phases of syllabus development and use.

References


Author Notes

Dr. Gregory Reddan is a Lecturer in the School of Physiotherapy and Exercise Science at Griffith University, Gold Coast campus. His research interests include curriculum decision-making, sports coaching and sports psychology. He lectures in undergraduate courses in Sports Coaching, Exercise and Sport Behaviour, Health & Exercise Organizations and Field Project.

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