



# Teaching Information Systems Policy: Electronic Sophism?

David A Banks

School of Accounting and IS, University of South Australia, Adelaide; [david.banks@unisa.edu.au](mailto:david.banks@unisa.edu.au)

## ABSTRACT

*This paper describes the delivery of a third year undergraduate Information Systems Policy subject in which use was made of 'debate' as a way of exploring underlying value systems in policy development. The students developed the peer marking scheme for the debate sessions through the use of a facilitated electronic meeting.*

## INFORMATION SYSTEMS POLICY

The main aim of this third year undergraduate subject is to introduce students to issues relating to the development of policy in the area of IS and IT with particular emphasis on the idea of people as policy makers. The broad approach adopted was interpretivist in nature with the aim of exploring the ways in which policies are made rather than working through existing examples of specific policies. Some aspects of IS/IT policy making can be seen as being essentially technical in nature, for example policies related to procurement or those relating to the backing up of systems. There is, of course, a human element in these areas, for example in the choice of procurement model or allocation of responsibility for backing up, but there are broad guidelines that can be used by policy makers in these areas. When one examines policy areas such as internet access, e-mail management and the marketing of database information the guidelines either do not appear to exist or are open to wide interpretation. The line of argument taken in this subject was that individual, organisational and cultural characteristics are likely to be strong sources of influence on policy development and that an appreciation of these areas is therefore important in order that some explanation of the differences in policy between organisations can be developed.

## TEACHING/LEARNING APPROACH

This is a third year subject and one of my main aims is to encourage students to think, explore and challenge rather than absorb my views of the world and then simply recite them. The subject of information systems, being a derivative subject, draws upon many disciplines including computer science, business, philosophy, sociology and psychology and it is this richness that needs to be conveyed to students. However, richness brings with it complexity and the need for broad reading, analysis and critical thinking. Sadly, some students seem to find that an approach that does not work from a single set book, and that challenges conventional views and encourages thinking rather than memorising to be somewhat daunting. I would argue that in the information systems domain learning to think is more important than learning 'facts', but I also recognise that critical thinking is not an easy skill to develop. As Dewey comments:

"If the suggestion that occurs is at once accepted, we have uncritical thinking, the minimum of reflection. To turn the thing over in the mind, to reflect, means to hunt for additional evidence, for new data, that will develop the suggestion, and will either, as we say, bear it out or else make obvious its absurdity and irrelevance. The easiest way is to accept any suggestion that seems plausible and thereby bring to an end the condition of mental uneasiness. Reflective thinking is always more or less troublesome because it involves

overcoming the inertia that inclines one to accept suggestions at their face value; it involves willingness to endure a condition of mental unrest. Reflective thinking, in short, means judgment suspended during further inquiry; and suspense is likely to be somewhat painful"

The other influences that guide the delivery of the subject include ideas in the Cooperative/Collaborative Learning (CCL) literature, which typically notes the following key points as identifiers of CCL:

- Students work and learn together in small (2-5 member) groups.
- Their task is carefully designed to be suitable for groupwork.
- There is positive interdependence - cooperation is necessary for students to succeed.
- Students are individually accountable for learning and participation.
- Attention and class time is given to interpersonal/cooperative skill building.
- The role of the teacher changes from being the "sage on the stage" to "the guide on the side."

Collaborative learning literature also suggests that the student who learns best is the one who organises, summarises, elaborates, explains and defends. It is suggested that the person who does the intellectual work, especially the conceptual work, learns the most and that students learn more when they are doing things they enjoy and that more learning occurs in an environment of peer support and encouragement because students work harder and longer.

Given that Information Systems Policy is a third year subject it was assumed that the interpersonal/cooperative skill building areas had already been addressed prior to this subject. In fact this assumption is probably not true and should the subject be operated in this format again time would be devoted to these areas.

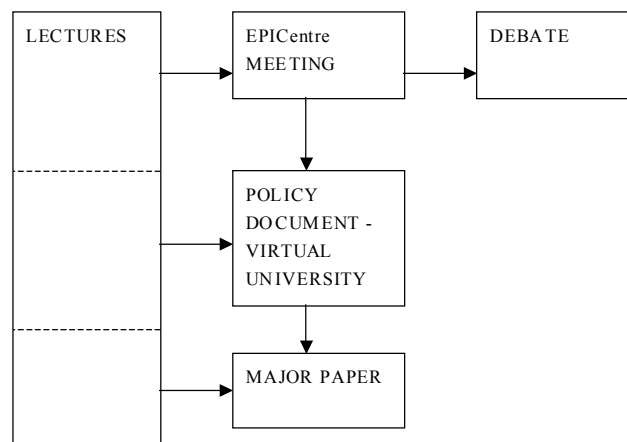
The starting point for this subject was to consider the way in which different people view the world and express their value systems through language. This was framed within the interpretivist views of information systems. The scene was set with me declaring my roles as teacher for areas I felt reasonably confident I could defend, facilitator for learning development and learner when they discovered views I had not previously met. I also drew on Ann Kerwin's ideas of the exploration of ignorance that she presented in a seminar she conducted in New Zealand. Kerwin comments that "Thus, even as we debate the nature and extent of human knowledge, we see that the domain of non-knowledge - ignorance - contains all of the things we know we don't know; all the things we don't know we don't know; and all the things we think we know but don't."

In the opening lecture the views of various philosophers such as Plato, Socrates, Descartes etc were presented and the Sophist

view of the world in particular was explored. The idea of a group of policy makers trying to develop some specific policy in a setting where it could be argued that there is no such thing as reality was presented. This was developed by examining some 'evidence' of the real world that could be interpreted in a number of ways, eg the various figures offered for rates of growth in e-commerce, 'failure' of IT/IS projects etc.

In order that such difficult areas could be explored in a concrete way to support the rather abstract lectures, and to reinforce the structure, three pieces of assessment were developed. The assessments formed the major learning mechanism of the subject, supported by the lectures that provided the 'glue' and the speculation. The assessments used comprised, in order of delivery, a debate session, a group based policy document for a fictional virtual university, and an individual conference paper style piece of work on some aspect of IS policy. The debate element is the major focus for this paper but the other two elements are outlined here to provide overall context. The relationship between the various elements is indicated in the diagram below:

#### Subject Structure



#### Policy document

The virtual university policy document exercise was designed to support groups of approximately six members working around a single document that had to have a consistent presentation and where each individual policy area (one area for each group member) must clearly derive from a mission statement produced by the whole group. An overall group mark was generated on the basis of the consistency and 'feel' of the document and a second mark was produced for each individual students work within that document. The choice of a virtual university was made for three reasons. Firstly it is possible to find on-line examples of policy documents for most universities and these would act as a starting point. The second reason was to lead students to think about the people who would use their virtual university - that is students - and to determine if a student is a client, product, stakeholder etc. (This links to another piece of work that was carried out with the same group to examine the problems of interpreting the student evaluation questionnaire (CEQ)). The third reason was to provide a concrete basis for students. The use of broader business would have been appropriate for the half of the group who are part time students, but not for those full time students who have little experience of the business setting. The policy areas available to students were:

- Selection, procurement and management of hardware and software
- Service level agreements, backups, maintenance
- Security and access control, passwording, virus management

- E-mail conduct, general codes of conduct
- Training, staff and student account management, software control (anti-piracy)
- Legal, health and safety
- Privacy, ethical issues

The final document had to be presented as a 'corporate' document, that is it had to have consistent style etc and not appear as a number of individual pieces of work simply stapled together. Each policy area had to be clearly linked to the vision/mission statement agreed by the whole group and the work had to be presented in hyper-linked form to indicate links between individual topic areas. The use of positioning statements, goals and so on was encouraged to articulate the value systems that lay behind their vision of a virtual university.

#### Individual paper

The larger individual conference style paper was to allow students to pursue individual areas of interest to greater depth and also to ensure that they had control of a substantial set of marks to balance the need for working in groups. This was the final piece of work and should have benefited from the critical thinking that the debate session developed combined with the structure and logic of the policy document. Students had a choice from fifteen topics, including BPR, outsourcing, knowledge management, e commerce, national and international IT policy and policy making in a turbulent environment. The work had to be presented in conference paper style with abstract, keywords, full references and so on. References had to include a selection from text books, journal and conference papers and from internet sources.

#### THE DEBATE

For the debate assessment a range of eleven statements were offered to form the focus for the debates, including:

- Any e-mail generated by any individual is their own private property and should not be accessed by their employer
- It is a waste of time and energy allowing most end users to develop their own spreadsheets and databases as they do not have the skills that an IS specialist would have, nor do they have the aptitude to be trained in what is essentially a computing discipline
- Network Computing will replace the more traditional main-frame or end user models as it offers greater flexibility, lower cost and high resilience
- The Internet offers true democracy to everyone and there should be no attempts to control it by government or other agencies.
- Disaster Recovery planning is an essential part of the planning of any organisation that makes use of IT/IS and is such a simple process that there is no excuse for not undertaking this planning
- The fact that the term 'Information Systems' is not known by most large businesses is not a problem because it is exactly the same as 'Information Technology'

Students were free to choose from the list.

Students were asked to indicate preferences for the various topics and eventually arranged in groups of six for the chosen topics, with a requirement for three of the group to research the 'pro' side of the topic and the remaining three to research the 'con' side. I decided that it would be useful for the students to produce the marking scheme for the debate sessions. There were two reasons for this; firstly to encourage ownership of the assessment and secondly the process of developing criteria as a group would raise some communication and value system issues found in policy making. The criteria developed by all students would be used to

allow the ‘audience’, rather than me, to mark the debates. This raised some lively discussion around the possibility of students giving each other maximum marks, but my suggestion that groups could run the risk of awarding top marks to a group that did not reciprocate caused a re-think. My past experience of peer marking suggested that students are often tougher markers than I am and I was therefore willing to take the risk.

### Criteria development

The criteria were identified by asking students to work in groups of fifteen in their one hour tutorial sessions using a group support system. The software used was GroupSystems from Ventana, the software being based in the EPICentre in the School of Accounting and Information Systems. An extra benefit here was that students would experience an electronic meeting thus providing a link to one of the lectures that examined the use of technology supported meetings for policy making. The agenda was that students would initially enter any ideas that they felt would be appropriate as a basis for the development of criteria for judging a debate session. Many students asked what a ‘debate’ was and were encouraged to take a broad view encompassing political through to televised ‘entertainment’ debates.

Typically each of the six groups generated in excess of sixty ideas in less than ten minutes using the Categorizer tool. Sample comments, included:

- Creativity
- A realistic presentation of the topic
- Knowledge of presenter
- Knowledge of subject
- Ability to answer audience questions
- Prepared discussion to achieve a required result
- Learning
- Rebuttal would restrict the debate to a traditional style debate
- I thought this was a traditional style debate
- Positive counter argument
- Sharing ideas
- Communicating an idea to others
- Main point
- Clear concise points, no waffle
- Common interest
- Supporting evidence
- Professionalism
- Uncovering a large number of the key issues
- Dress
- Concise arguments, ones that are not drawn out
- Rational, controlled argument
- Any form of trickery, deception or confusion that’s able to undermine the other party’s argument
- Discredit opposition
- Ability to address the others sides arguments as the debate unfolds
- Understanding opponents view
- Stick to a time limit
- Presented to show research has been carried and the language used will influence the audience
- Use a little philosophy to baffle your opponent
- Precision and clarification
- Use a little joke
- Make sure the audience does not fall asleep

There were duplicate items or similarly expressed ideas and these were merged to reduce the length of the list. The secondary purpose of this merging process was to force students to decide if a number of apparently similar words or brief sentences could be

legitimately merged into one. As was anticipated, considerable debate arose around the meaning of specific words, sometimes even around just a single word. This process caused many students to appreciate the problems that would be faced in both the remaining assessment components and in the ‘real world’.

The merged example shown below should provide an idea of the problems faced by students. The numbered item is a main heading and the three following comments are merged into this heading:

14. strength of argument- backed up comments, based on credible literature
  - able to support argument with reasons
  - quality of argument
  - convincability

Clearly there could be extended debate over the words used in the example above, but time constraints meant that this issue could be highlighted but not explored to greater depth. Once a reasonable time had been given to the merging process the students were asked to vote on the importance of the list items generated using the Voting tool. This prioritised list was used as the basis for building a composite list that combined the views of all of the separate GroupSystems meetings.

The top seven items generated by the merging and voting processes were:

- Facts to back up argument, fact and logic, valid argument
- Remaining with key argument, relevant points
- Good structure, logical flow, conclusion, clear
- Covered all major areas, Acknowledges limitations
- Credible, knowledge of subject, strength of argument
- Creative, interesting, entertaining, original
- Exposing cracks in opposition, good rebuttal, answers questions

It was suggested to the students that perhaps the easiest way to undertake marking was to mark each out of 10, with an extra item for overall impression worth 5, thus leading to a maximum possible mark of 75. A simple division by 5 would produce a mark out of 15 (the weighting for this element of assessment).

It was also suggested to the students that the problem with the above may be that this is quite a complicated scheme, given that there would be little time between the actual presentations. An alternative suggestion was that the students held all of the above criteria ‘in their heads’ and simply generated a mark out of 15. The obvious problem is this approach lacks the precision of a more detailed scheme. (A hidden agenda here was to lead students into thinking about the development and detail of marking schemes in general. The outcome seems to be that if an academic offers a marking scheme they would like to know exactly what is being looked for to the nearest mark, but if they generate a scheme a single figure is fine. Greater involvement of students in the development of marking schemes would seem to offer potential advantages to academics and I need to develop my thinking further on this issue).

The above details and comments about possible marking schemes were placed on the subject web page and students invited to email comments. As a result of these comments, which leaned towards the simpler marking scheme another set of criteria drawn from the EPICentre meetings, which provided a more general view, was offered:

- ability to address the others sides arguments as the debate unfolds
- any form of trickery, deception or confusion that’s able to undermine the other party’s argument
- discredit opposition

- use a little philosophy to baffle your opponent
- are they listening to the other side of the debate
- counter arguments judged for relevance to other teams argument
- marks awarded on quickness of counter argument
- Is the argument persuasive?
- confident, clearly expressed views, valid, humorous and entertaining
- Convincing argument
- How compelling is the argument?
- if it is a Sophists argument then is it well presented? Content should not be valid - should it?
- If we are to use the Sophists approach then it is the way that the argument is presented rather than its content
- does it meet the requirements of the marker - shouldn't this be all that is important particularly if we are using the Sophists argument?
- Do they present themselves convincingly (ie, confident, poised)?
- do they listen to counter or new point made and respond appropriately
- strength of argument- backed up comments
- presented to show research has been carried and the language used will influence the audience
- communicating an idea to others
- body language
- the tone of voice

At the actual debate sessions students were given a printed copy of both sets of criteria and less than 10% of the students appeared to use the detailed multiple criteria set, the majority preferring to work from the global ideas.

#### The debates

The actual debate sessions were all excellent, displaying creativity and very high levels of commitment. The approaches used included traditional debate style, a 'play', a meeting, and a collaborative working where one team worked through 'pro' bullet points one by one and the other team critiqued each point in response. Although many students used brief notes to support their 'speeches' these were abandoned once the debate began to become a little more 'heated' and often clearly considered, and sometimes strongly held, views emerged. The marking was very close to the marks I would have awarded, particularly given the high levels of creativity and commitment. The comments that students wrote on the marking sheets were again similar to my own, typical comments being shown below:

- They really made some very good, new points
- A new meaning to plays - it was good!
- Interesting arguments backed up by 'facts', structure was good
- Good concept, well structured, rebutted answers well, clear voices
- An example of a real life board meeting used - interesting! Good
- Good punchy points and good use of audience participation
- Bit bland - no new areas addressed

- Good - interesting interaction at the end
- Couldn't understand properly but seemed well researched
- I expected a debate but this seemed more like a presentation

#### CONCLUSION

A number of students found Information Systems Policy to be a difficult subject, often perceiving it as having poor structure and having difficulty in being able to connect the abstract and concrete concepts. However the general pattern was one of initial bemusement followed by a realisation that policy making is a complex and fascinating subject. The type, depth and quality of questions being asked by the students as the subject progressed suggested that deeper learning was taking place for many students. The debate sessions indicated high levels of ownership of the process and produced creative and dynamic teamwork in the majority of groups.

The approach taken to the teaching and learning of this subject introduced students to the complexity of the development of information systems policy through the process of both abstract argument and concrete policy document preparation. The influence of language, culture, organisational structure, value systems and a wide variety of other areas were explored to help students to recognise the difficulties of producing practical policies in the information systems domain. The use of an electronic meeting system in which the students were actively involved in the creation of the marking criteria provided practical experience of some of the human issues that drive policy making. This allowed them to explore some of the ideas introduced in the lectures that explored the notion that the Sophists were extremely doubtful about the possibility of discovering anything that was 'real' and argued that, therefore, the only way to progress in the world was to have the skills to win disputes and to speak well and convincingly. However, the criticism that Socrates pointed at the Sophists, namely that people also need to know what to speak *about*, what to convince people *of* and *where* to lead them, became clear to the students and produced rich debate.

The underlying aim of this subject was to lead students to a position where they would be able to critically examine information systems policies and so gain a better understanding of how those policies were derived from both technical and human standpoints. Armed with that understanding there is a greater probability that they will be able to question the policy makers in a sensible manner and influence the development of policies that take into account the richness of the socio-technical issues that comprise the information systems environment. Many students enjoyed the opportunity to think and work 'outside the square' and their ownership of the assessment development led to both high quality work and good feedback. The quality of the individual papers was also good, indicating possible transfer of analytical skills from the debate to the major paper.

#### REFERENCES

- Dewy J, 1910, "*How We Think*", Heath and Co  
 Kerwin A, May 1994, "*Assessing Critical Thinking*", Ann Kerwin, (HERDSA visiting speaker, Auckland Institute of Technology)

## Related Content

---

### A Study on Bayesian Decision Theoretic Rough Set

Sharmistha Bhattacharya Halder (2014). *International Journal of Rough Sets and Data Analysis* (pp. 1-14).  
[www.irma-international.org/article/a-study-on-bayesian-decision-theoretic-rough-set/111309/](http://www.irma-international.org/article/a-study-on-bayesian-decision-theoretic-rough-set/111309/)

### An Artificial Intelligent Centered Object Inspection System Using Crucial Images

Santosh Kumar Sahoo and B. B. Choudhury (2018). *International Journal of Rough Sets and Data Analysis* (pp. 44-57).  
[www.irma-international.org/article/an-artificial-intelligent-centered-object-inspection-system-using-crucial-images/190890/](http://www.irma-international.org/article/an-artificial-intelligent-centered-object-inspection-system-using-crucial-images/190890/)

### Mathematical Representation of Quality of Service (QoS) Parameters for Internet of Things (IoT)

Sandesh Mahamure, Poonam N. Railkar and Parikshit N. Mahalle (2017). *International Journal of Rough Sets and Data Analysis* (pp. 96-107).  
[www.irma-international.org/article/mathematical-representation-of-quality-of-service-qos-parameters-for-internet-of-things-iot/182294/](http://www.irma-international.org/article/mathematical-representation-of-quality-of-service-qos-parameters-for-internet-of-things-iot/182294/)

### A Roughset Based Ensemble Framework for Network Intrusion Detection System

Sireesha Rodda and Uma Shankar Erothi (2018). *International Journal of Rough Sets and Data Analysis* (pp. 71-88).  
[www.irma-international.org/article/a-roughset-based-ensemble-framework-for-network-intrusion-detection-system/206878/](http://www.irma-international.org/article/a-roughset-based-ensemble-framework-for-network-intrusion-detection-system/206878/)

### Improving Usability of Website Design Using W3C Guidelines

G. Sreedhar (2018). *Encyclopedia of Information Science and Technology, Fourth Edition* (pp. 8006-8014).  
[www.irma-international.org/chapter/improving-usability-of-website-design-using-w3c-guidelines/184496/](http://www.irma-international.org/chapter/improving-usability-of-website-design-using-w3c-guidelines/184496/)