

Assessment within Applied/Professional Ethics

Teachers and students need to have a well-founded confidence in their assessment methods. Assessment should be objective, consistent, transparent and appropriate to the needs of the subject area. This paper will consider assessment within applied and professional ethics learning and teaching, to determine whether this subject area raises particular concerns and challenges.

Ethics as a Primary Area of Study

Assessment of applied ethics modules within humanities based disciplines such as philosophy and religious studies is broadly similar to that found in other humanities-based fields of study.

Firstly, students are assessed on their knowledge of the subject matter. In ethics this will mean addressing themes drawn from moral theory and/or the history of ethical thought and their application to real life or life-like situations.

Secondly, students are assessed on those skills and intellectual faculties needed to develop a critical understanding of their subject matter. In ethics this will normally entail demonstrating a capacity for conceptual analysis and the ability to construct reasoned arguments. Students will also be expected to show an awareness of differing perspectives on contested issues and a willingness to subject those perspectives to equally stringent scrutiny including (and indeed, especially) their own point of view.

Assessment methods vary but traditional written forms such as essay writing are seen as a useful format, allowing tutors to assess the student's understanding of the topic, their willingness to evaluate it critically and their capacity to present their ideas and arguments in a coherent, consistent and structured form.

In some modules a capacity to engage in verbal discussion will be considered desirable. However, assessment of this ability is more difficult, both in terms of its initial application and its susceptibility to external examination techniques such as double-marking. Verbal presentation forms are therefore less likely to contribute to the student's final degree classification.

Assessment methods within the humanities are under constant review, as they are in most areas of Higher Education, but there is no reason to think that ethics poses any special problems, over and above those of the parent discipline. However, for ethics learning and teaching in other faculties such as science, medicine and healthcare, the situation is somewhat different and assessment presents challenges that are unique to the subject.

Professional Ethics

A key difference between assessment of professional ethics modules and assessment of ethics within a general programme of philosophical enquiry centres on the relationship between ethics learning and teaching and the conduct of individual students.

Benchmarking statements and professional codes from science, engineering and a range of applied disciplines indicate that ethics is now seen as an integral part of a graduate's ability to function effectively in the workplace. As a result, ethics may be embedded in the rapidly evolving notion of what it means to be a 'Professional', an ideal that links ethical behaviour to interpersonal communication, professional competence and management skills rather than a facility with moral theory. This ideal of professional competence may sometimes be linked to a requirement that students recognise and are

able to think critically about moral issues arising from their primary area of study. In these cases, assessment will be broadly similar to that found in theory-oriented disciplines although it should be applied in a way which is sensitive to the fact that the students' broader programme of study might be unsupportive of the skills and aptitudes required for a consideration of moral theory.

For subjects such as medicine, nursing, pharmacy, dentistry, social work and education, the link between ethics and professional conduct is paramount as graduation will normally lead directly or indirectly to state registration and graduates must therefore meet behavioural standards in addition to academic criteria to ensure their Fitness to Practice.

- Ethics learning and teaching within humanities-oriented programmes assesses the student's ability to apply ethical principles to situations modelled on real life.
- Ethics taught as a means to Fitness for Practice assesses the student's ability to apply ethical principles to their own conduct.

For example the benchmark statement for Medicine states that:

'Assessment strategies and methods must ensure that the knowledge, understanding, skills and attitudes ... are sufficiently covered'.

Similarly, the benchmark statement for Midwifery requires student-centred learning approaches that:

*'...enable students to be self-critical and make adjustments to their attitudes and goals'*².

Assessment of student performance is therefore important as a means of determining whether they have reached the acceptable minimum level of attainment with regard to Fitness for Practice. In some cases it will also be used to grade their performance against a scale of achievement superseding that minimum acceptable level.

However, assessment of student performance is also of increasing use as a means of appraising the effectiveness of the learning and teaching environment. The main difference between assessment in these two contexts is that **assessment of the student's** performance requires an end-state appraisal with respect to the defined aims of the course, while **assessment of the learning and teaching environment** will normally require at least two measurement points - one at the start of the module and one at its completion – to determine whether the learning environment has brought about a change in student performance with respect to the defined aims of the course.

A high level of student attainment will often be taken to indicate that the learning and teaching environment is of similarly high quality, but there are other significant factors, such as student entry level of knowledge and natural aptitude for the subject.

For any course, however successful and whatever the subject area, it can be useful to consider how far the quality of student performance reflects the quality of the learning and teaching environment but this is of particular utility in professional ethics where:

- a) It is a moot point how far professional ethics *can* be taught within Higher Education, given that its primary aim is to influence behaviour and its learners are at or approaching adulthood.
- b) There is an alternative to instruction, namely **selection**.

¹ <http://www.qaa.ac.uk/crntwork/benchmark/phase2/medicine.pdf>.

² <http://www.qaa.ac.uk/crntwork/benchmark/nhsbenchmark/midwifery.pdf>.

Within any subject area there will be some skills or aptitudes that students are expected to bring to the course, as a necessary precondition and no student is likely to enter Higher Education as an ethical *tabula rasa*. They can be expected to have moral principles (even if they do not recognise them as such), and some capacity for discussion of ethically sensitive issues. In more general terms they will have what might be called a moral character; a behavioural and attitudinal disposition that can be evaluated against the professional standards or criteria of Fitness for Practice. Selection therefore offers an alternative way of ensuring that students are fit for practice, and can be applied in tandem with, or as an alternative to, instruction.

One criticism of selection is that there are no reliable methods of selecting students on the basis of good or virtuous character. All the selection systems on offer (interviews, character references, psychological tests, record of public service *etc.*) have some deficiencies. These criticisms would also hold true for instruction aimed at developing or improving moral character as one cannot evaluate the success of a course without a reliable way of measuring its intended outcomes. However, Pellegrino and Thomasma argue that there are many elements of medical education that do not yield to easy measurement³. This does not mean that one cannot gain some idea of the student's competence, but rather that assessment must itself be assessed carefully.

The benchmark statement for Medicine acknowledges that:

*'Assessment of some qualities will require extended observations to be made. While professional attitudes, for example, may be difficult to assess directly, the consequences of attitudes on behaviour must be assessed - usually by observation of that behaviour over a period of time. Assessment needs to be thorough but should not be so onerous or so frequent as to interfere with the learning process'*⁴.

Currently, a mixture of selection and instruction with respect to ethically relevant characteristics is applied for courses in which Fitness for Practice is an issue. For example, empathy may be specified as desirable quality in applicants to schools of nursing, but the course modules will aim to foster and develop this trait, in concert with other ethically relevant skills.

Assessment of Moral Reasoning

One of the most contentious elements within Professional ethics is the role of moral reasoning. While few would argue that moral reasoning skills alone are sufficient to ensure high standards of conduct, there are those who insist that they are necessary, if not a sufficient condition. Gillon compares the attempt to define the virtues of a good doctor:

*"without critical philosophical study of the moral assumptions and objectives of medical practice" to "specifying the syllabus for therapeutics while claiming that neither medical students nor the doctors laying down the syllabus need to know any pharmacology"*⁵.

Much of the literature on ethics pedagogical research emphasises the enhancement of critical reasoning faculties as a key objective for professional ethics modules. However

³ Pellegrino E.D. & Thomasma D.C. (1993) *The Virtues in Medical Practice*, (Oxford: Oxford University Press), p 179.

⁴ <http://www.qaa.ac.uk/crntwork/benchmark/phase2/medicine.pdf>.

⁵ Gillon R. (1999) *Philosophical Medical Ethics*, John Wiley & Sons: Chichester, p.33.

contested the connection between moral reasoning and high moral standards of behaviour, there is some consensus that moral reasoning is the aspect which:

- a. Can be taught.
- b. Can be assessed.

The neo-Kohlbergian Approach to Measuring Moral Reasoning Capacity

The neo-Kohlbergian approach to the measurement of moral reasoning capacity arose from collaboration between moral philosophy and moral psychology and has been very influential in recent literature. Kohlberg⁶ defined a theory of moral development in which we progress through six identifiable stages that can be classified into three levels of reasoning about moral dilemmas:

Pre-Conventional – reasoning based on self-interest. The individual aims to win rewards and avoid punishment.

Conventional – reasoning based on conformity to social norms and expectations such as family or peer-group pressures.

Post-conventional – reasoning based on universal ethical principles, centred on the notion of justice⁷.

Progression through these stages is regarded as a move towards increasing sophistication in moral reasoning, and can therefore be used to assess the impact of the learning and teaching environment on the moral development. Adults would normally be expected to have already attained the second (conventional) level of reasoning so ethics within Higher Education has focussed upon progression to the third, post-conventional, level.

Kohlberg developed **the Moral Judgement Interview (MJI)**^{8 9} as an assessment tool which uses dilemmas to assess moral judgement.

*The MJI consists of a 45-minute semi structured oral tape-recorded interview in which subjects are asked to resolve a series of three moral dilemmas. Each dilemma is followed by a systematic set of open-ended probe questions designed to enable the subject to reveal the structure of logic of his or her responses. Scoring yields an overall score, which is a continuous measure of moral maturity; and a score that reflects the subject's stage of moral reasoning.*¹⁰

The MJI is sensitive to the skill of the person responsible for scoring the subject's reply, and therefore requires that those administering the test have some training to enable them to perform it adequately. It also requires that the subject is able to explain their moral reasoning logically and coherently. The test might therefore favour people who have some background in moral philosophy.

⁶ <http://www.psy.pdx.edu/PsiCafe/KeyTheorists/Kohlberg.htm>

⁷ Kohlberg, L. (1984) *Essays on Moral Development*. New York: Harper & Row.

⁸ Kohlberg, L. (1973?). *Moral judgement interview and procedures for scoring*, Cambridge: Harvard University.

⁹ Colby, A., Kohlberg, L., Speicher, B. *et al.* (1987) *The Measurement of Moral Judgement*, vol. 1 and 2, New York: Cambridge University Press.

¹⁰ http://www.bc.edu/bc_org/avp/son/ethics/database/4.05.02.html.

Other research has built on Kohlberg's approach to develop assessment methods that aim to determine whether students have made the transition from conventional to post-conventional moral reasoning, most notably with the Defining Issues Test (DIT).

Defining Issues Test (DIT) is self-administered. Subjects are presented with short vignettes or dilemmas then asked to select their answers on a multiple-choice basis.

Because the DIT does not require the subject to articulate a reply in their own words, it 'measures recognition knowledge, a type of tacit knowledge [rather than explicit verbal knowledge].' For a discussion of the DIT and its application see:

- *Postconventional Moral Thinking: A Neo-Kohlbergian Approach* (1999) by James Rest, Darcia Narvaez, Muriel J. Bebeau, Stephen J. Thoma (published by Lawrence Erlbaum Associates).

Online information can be found on:

- <http://www.mc.vanderbilt.edu/medschool/OIG/documents/2003-10-22%20J%20Club%20-%20Rest's%20Defining%20Issues%20Test.doc>.
- http://cstl-hcb.semo.edu/cherry/Research/DIT_Four_Scenario2.htm
- http://www.prenhall.com/whetten_dms/chap1_2.html
- <http://wbarratt.indstate.edu/dragon/saroi/sa-dit.htm>.

Other publications from the originators of the DIT are:

- Rest, J.R., 1990. *DIT manual*. , University of Minneapolis Press, Minneapolis, MN.
- Thoma S.J., Narvaez D., Rest J., Derryberry P. (1999) 'Does Moral Judgment Development Reduce to Political Attitudes or Verbal Ability? Evidence Using the Defining Issues Test', *Educational Psychology Review*, vol.11 (4) pp. 325-341.
- Thoma S.; Barnett R.; Rest J.; Narvaez D. (1999) 'What does the DIT measure?' *British Journal of Social Psychology*, vol. 38, no. 1, pp. 103-111.

Other research evaluating the DIT:

- Bay, D. (2002) 'A critical evaluation of the use of the dit in accounting ethics research, *Critical Perspectives on Accounting*, vol. 13, no. 2, pp. 159-177.
- Brendel J.M.; Kolbert J.B.; Foster V.A., (2002) Promoting Student Cognitive Development, *Journal of Adult Development*, no. 3, pp. 217-227.
- Fisher D.G.; Sweeney J.T., (1998) 'The Relationship Between Political Attitudes and Moral Judgment: Examining the Validity of the Defining Issues Test', *Journal of Business Ethics*, vol. 17, no. 8, pp. 905-916.
- Narvaez D. (2001) 'Moral Text Comprehension: implications for education and research', *Journal of Moral Education*, vol. 30, no. 1, pp. 43-54.
- Narvaez D.; Bock T.(2002) 'Moral Schemas and Tacit Judgement or How the Defining Issues Test is Supported by Cognitive Science, *Journal of Moral Education*, vol. 31, no. 3, pp. 297-314.
- Nucci L. (2002) Goethe's Faust Revisited: lessons from DIT research, *Journal of Moral Education*, vol. 31, no. 3, pp. 315-324

- Puka B. (2002) 'The DIT and the 'Dark Side' of Development, *Journal of Moral Education*, vol. 31, no. 3, pp. 339-352.
- Skoe E.E.A.; von der Lippe A.L. (2002) 'Ego Development and the Ethics of Care and Justice: The Relations Among Them Revisited', *Journal of Personality*, vol. 70, no. 4, pp. 485-508.
- Walker L.J. (2002) 'The Model and the Measure: an appraisal of the Minnesota approach to moral development, *Journal of Moral Education*, vol. 31, no. 3, pp. 353-367.

Research that has used the DIT:

- Endicott L.; Bock T.; Narvaez D, (2003) 'Moral reasoning, intercultural development, and multicultural experiences: relations and cognitive underpinnings', *International Journal of Intercultural Relations*, vol. 27, no. 4, pp. 403-419.
- King P.M.; Mayhew M.J. (2002), 'Moral Judgement Development in Higher Education: insights from the Defining Issues Test', *Journal of Moral Education*, vol. 31, no. 3, pp. 247-270.
- Krawczyk R.M., (1997) 'Teaching Ethics: effect on moral development', *Nursing Ethics*, vol. 4, no. 1, pp. 56-65.
- Latif D.A (2001) 'The Relationship Between Ethical Reasoning and the Perception of Difficulty with Ethical Dilemmas in Pharmacy Students: Implications for Teaching Professional Ethics, *Teaching Business Ethics*, vol. 5, no. 1, pp. 107-117.
- Latif D.A., (2002) 'Assessing the Moral Reasoning of American Pharmacy Students', *Pharmacy Education*, vol. 2, no. 4, pp. 177-183.
- McGillicuddy-De Lisi A.V.; Sullivan B.; Hughes M.b., (2003) 'The effects of interpersonal relationship and character gender on adolescents' resolutions of moral dilemmas', *Journal of Applied Developmental Psychology*, vol. 23, no. 6, pp. 655-669.
- Mudrack P.E., (2003) 'The Untapped Relevance of Moral Development Theory in the Study of Business Ethics', *Journal of Business Ethics*, vol. 42, no. 3, pp. 225-236.
- Nelson, D. (2000), 'Multiple Methods for Analysing Moral Judgment Development Using the Defining Issues Test'. *Research on Christian Higher Education*, Council for Christian Colleges & Universities.
- Pennino C.M.,(2002) Is Decision Style Related to Moral Development Among Managers in the U.S.?, *Journal of Business Ethics*, vol. 41, no. 4, pp. 337-347.
- Rogers V.; Smith A (2001) 'Ethics, Moral Development, and Accountants-in-Training', *Teaching Business Ethics*, vol. 5, no. 1, pp. 1-20.
- Zarinpoush F.; Cooper M.; Moylan S. (2000) 'The Effects of Happiness and Sadness on Moral Reasoning', *Journal of Moral Education*, vol. 29, no. 4, pp. 397-412

It has, however, been acknowledged that moral reasoning alone is insufficient to produce moral behaviour and Rest¹¹, Bebeau¹² and Thoma have developed Kohlberg's theory to propose a **Four Component Model (FCM) of Morality**¹³, summarised as follows:

1. Moral sensitivity (interpreting the situation as moral).
2. Moral judgment (judging which of the available actions are most justified).
3. Moral motivation (prioritising the moral over other significant concerns).
4. Moral character (being able to construct and implement actions that service the moral choice).

Drawing primarily on research in psychology and philosophy, they apply the FCM to professional ethics by adding profession-specific measures labelled '*intermediate concepts*'¹⁴, stressing the need for more interdisciplinary collaboration.

Profession-specific tests developed by them include:

The **Dental Ethical Sensitivity Test (DEST)**: see

- Bebeau, M. (1994). 'Influencing the moral dimensions of dental practice', in Rest, J. and Narvaez, D. (eds.), *Moral development in the professions*, Hillsdale, NJ: Erlbaum, pp. 121-146.

For a comparison of the DIT, with the TESS and the Perry Questionnaire (details of TESS & Perry below) see.

- Clarkeburn H.; Downie J.R.; Matthew B, (2002), 'Impact of an Ethics Programme in a Life Sciences Curriculum', *Teaching in Higher Education*, vol. 7, no. 1, pp. 65-79.

The **Dental Ethical Reasoning and Judgement Test (DERJT)**: see:

- <http://www.ori.dhhs.gov/multimedia/acrobat/papers/bebeau.pdf>.

Another test based on Kohlberg's theory is the **The Sociomoral Reflection Measure (SRM)** developed by John C. Gibbs, Keith F. Widaman and Anne Colby (1982). This measures the stages of moral reasoning using the Social Reflection Questionnaire. It is held to be simpler than the MJI but more expansive than the DIT. Like the MJI it requires the subject to explain their moral decisions in their own words, but unlike the MJI the SRM requires a written answer. The SRM can be administered to groups.

For details on using the SRM see :

¹¹ Rest, J. R. (1983). 'Morality'. In Mussen, P. H. (ser. ed.), Flavell, J., and Markman, E. (vol. eds.), *Handbook of Child Psychology: Cognitive Development*, Vol. 3, Wiley, New York, pp. 556-629.

¹² Bebeau M.J. (2002) 'The Defining Issues Test and the Four Component Model: contributions to professional education', *Journal of Moral Education*, vol. 31, no. 3, pp. 271-295

¹³ Rest J.; Narvaez D.; Bebeau M.; Thoma S. (1999) 'A Neo-Kohlbergian Approach: The DIT and Schema Theory A Neo-Kohlbergian Approach: The DIT and Schema Theory', *Educational Psychology Review*, Vol. 11, No. 4, pp. 291-324.

¹⁴ Bebeau, M.J. & Thoma S.J., (1999) "'Intermediate' Concepts and the Connection to Moral Education", *Educational Psychology Review*, Vol. 11, No. 4, pp. 343-360.

- Gibbs, J. & Widaman, K. (1982). *Social Intelligence: Measuring the Development of Sociomoral Reflection*, 191-211. Prentice-Hall: NJ.

Further references:

- Basinger, K. S., Gibbs, J. C., & Fuller, D. (1995), 'Context and the measurement of moral judgment', *International Journal of Behavioral Development*, 18, pp. 537-556.
- Wurm-Schaar, M., James-Valutis, M., Hull, R., Triggie, D. 'The Effect of a Research Ethics Course on Graduate Students' Moral Reasoning', http://www.richard-t-hull.com/publications/effect_research_ethics.pdf.

Other Assessment Methods for Moral Reasoning

Within Business ethics the **Multidimensional Ethics Scale (MES)** has been widely used. See:

- Reidenbach, R.E., & Robin, D.P. (1988). 'Some initial steps toward improving the measurement of ethical evaluations of marketing activities', *Journal of Business Ethics*, 7, pp. 871-879.
- Reidenbach, R.E., & Robin, D.P. (1990). 'Toward the development of a multidimensional scale for improving evaluations of business ethics', *Journal of Business Ethics*, 9, pp. 639-653.
- Reidenbach, R.E., Robin, D.P., & Dawson, L. (1991). 'An application and extension of a multidimensional ethics scale to selected marketing practices and marketing groups', *Journal of the Academy of Marketing Science*, 19(2), pp. 83-92.
- Reidenbach, R.E., & Robin, D.P. (1993). A comment on 'A multidimensional scale for measuring business ethics: A purification and refinement'. *Journal of Business Ethics*, 12, pp. 663-664.

Other evaluations of the MES:

- Cohen, J.R., Pant, L.W. & Sharp, D.J. (1996) 'An Evaluation of the Multidimensional Ethics Scale as a Measure of Ethical Sensitivity: Implications for Accounting Ethics Research', *Behavioral Research in Accounting*, Volume 8 Supplement.
- Hyman, M.R. *A Critique and Revision of the Multidimensional Ethics Scale*, <http://www.empgens.com/Pubs/jems/MES.pdf>
- McMahon, J.M. *An Analysis of the Factor Structure of the Multidimensional Ethics Scale and a Perceived Moral Intensity Scale, and the Effect of Moral Intensity on Ethical Judgment*. (PhD Dissertation). <http://scholar.lib.vt.edu/theses/available/etd-05232002-130110/>

The MES has been used in research by:

- Cruz C.A.; Shafer W.E.; Strawser J.R. (2000) 'A Multidimensional Analysis of Tax Practitioners' Ethical Judgments', *Journal of Business Ethics*, vol. 24, no. 3, pp. 223-244
- Ellis, T.S. & Griffith, D. (2001) 'The evaluation of IT ethical scenarios using a multidimensional scale, ACM SIGMIS Database archive, Vol. 32 pp: 75 – 85.

The Perry Questionnaire assesses students' meta-ethical understanding. For a description of the method see:

- Perry Jr WG. (1970) *Forms of intellectual and ethical development in the college years: a scheme*. New York: Holt Rinehart & Winston, 1970.
- Perry, Jr W.G. (1999) *Forms of Ethical and Intellectual Development in the College Years: a scheme* (San Francisco, CA, Jossey-Bass).

For use of the Perry Questionnaire see:

- Clarkeburn H.M.; Downie J.R.; Gray C.; Matthew R.G.S., (2003) 'Measuring Ethical Development in Life Sciences Students: a study using Perry's developmental model', *Studies in Higher Education*, vol. 28, no. 4, pp. 443-456.

The Ethical Reasoning Tool (ERT).

The ERT was developed for use with nurses and categorises responses to a case study into three '*professional response levels*'¹⁵:

- Level 1 (traditional): Thinking dominated by practical considerations- '*predominantly reflects the use of personal moral values and beliefs (pre reflective) and/or conventional moral reasoning*'¹⁶.
- Level 2 (traditional reflective): Practical considerations moderated by some use of reflective reasoning, indicating '*recognition of at least some of the relevant ethical issues, and the need for consideration of more than own personal beliefs*'¹⁷.
- Level 3 (reflective): Critical thinking about ethical issues, with use of an ethical framework and recognition of the value of other points of view.

These levels identify reflective thinking as the basis on which nurses are likely to challenge unethical practises.

See: McAlpine H.; Kristjanson L.; Porocho D. , 'Development and testing of the ethical reasoning tool (ERT): an instrument to measure the ethical reasoning of nurses' *Journal of Advanced Nursing*, 1997, vol. 25, no. 6, pp. 1151-1161.

Ethics and Health Care Survey Instrument. Goldie *et al.* have used an adapted version of the Ethics and Health Care Survey Instrument (full details may be obtained from the authors), developed and tested by Kipnis & Gerhard at the University of Hawaii, John A. Burns School of Medicine. This method comprised 12 case vignettes, nine of which '*featured 'consensus problems', about which there is broadly shared, responsibly warranted agreement among specialists in medical ethics*'¹⁸. The other cases featured contested

¹⁵ McAlpine H.; Kristjanson L.; Porocho D. , 'Development and testing of the ethical reasoning tool (ERT): an instrument to measure the ethical reasoning of nurses', *Journal of Advanced Nursing*, 1997, vol. 25, no. 6, pp. 1151-1161

¹⁶ *Ibid.*

¹⁷ *Ibid.*

¹⁸ Goldie J, Schwartz L, McConnachie A, Morrison J. (2001) 'Impact of a new course on students' potential behaviour on encountering ethical dilemmas', *Medical Education*, Vol. 35, pp. 295-302.

issues. Like the DIT, students are asked to make a selection from predefined answers, but they are also asked to provide reasons for their response. See:

- Goldie J, Schwartz L, McConnachie A, Morrison J. (2001) 'Impact of a new course on students' potential behaviour on encountering ethical dilemmas'. *Medical Education* Vol. 35, pp. 295–302.
- Goldie J, Schwartz L, McConnachie A, Morrison J. (2002) 'The impact of three years' ethics teaching, in an integrated medical curriculum, on students proposed behaviour on meeting ethical dilemmas', *Medical Education* Vol. 36 pp. 489-497.
- http://www.jtsn-01.ac.uk/resources/best_practice/display_single_item?BestPracIndex=213

Virtue Ethics Scale. This was used by Shanahan and Hyman to classify people according to their beliefs about the virtuous qualities of businesspeople.

See: Shanahan K.J. & Hyman M.R. (2003), 'The Development of a Virtue Ethics Scale,' *Journal of Business Ethics*, Vol. 42: pp. 197–208.

Ethic of Care Interview: This test is designed to measure the development of the care ethic. It divides development into five hierarchical levels:

- 1) Self-concern.
- 2) Questioning of self-concern as a sole criterion.
- 3) Other-concern.
- 4) Questioning of other-concern as a sole criterion.
- 5) Balanced self and other concern¹⁹.

See:

- Skoe, E. E., & Marcia, J. E. (1991). 'A care-based measure of morality and its relation to ego identity', *Merrill-Palmer Quarterly*, 37, p. 289-304.
- Skoe, E. E. (1993). *The Ethic of Care Interview Manual*. Unpublished manuscript available from the author upon request. University of Oslo, Oslo, Norway.
- Skoe, E. E., & Diessner, R. (1994). 'Ethic of care, justice, identity and gender: An extension and replication', *Merrill-Palmer Quarterly*, 40, pp. 102-119.
- Skoe, E. E. (1995). 'Sex role orientation and its relationship to the development of identity and moral thought', *Scandinavian Journal of Psychology*, 36, pp. 235-245.
- Skoe, E. E., Pratt, M. W., Matthews, M., & Curror, S. E. (1996). The ethic of care: Stability over time, gender differences and correlates in mid to late adulthood. *Psychology and Aging*, 11, pp. 280-282.
- Skoe, E. E. A. (1998). 'The ethic of care: Issues in moral development' in E. E. A. Skoe, & A. L. von der Lippe (Eds.), *Personality development in adolescence: A cross national and life span perspective* (pp. 143-171). London, England: Routledge.

¹⁹ Skoe, E. E., & Marcia, J. E. (1991). 'A care-based measure of morality and its relation to ego identity', *Merrill-Palmer Quarterly*, 37, p. 289-304.

- Skoe, E. E. A., Hansen, K. L., March, W. T., Bakke, I., Hoffmann, T., Larsen, B., & Aasheim, M. (1999). 'Care-based moral reasoning in Norwegian and Canadian early adolescents: A cross national comparison', *Journal of Early Adolescence*, 19, pp. 280-291.

Test for Ethical Sensitivity in Science (TESS).

The TESS requires students to produce written responses to an unstructured story in which a number of ethical issues are embedded. Their responses are then scored according to their level of recognition of those ethical issues.

See:

- Clarkeburn, H. (2002) 'A Test for Ethical Sensitivity in Science' *Journal of Moral Education*, vol. 31, no. 4, pp. 439-453.

For a comparison of DIT, TESS and the Perry Questionnaire see.

- Clarkeburn H.; Downie J.R.; Matthew B, (2002), 'Impact of an Ethics Programme in a Life Sciences Curriculum', *Teaching in Higher Education*, vol. 7, no. 1, pp. 65-79.

For an online summary of assessment methods suitable for use in ethics learning and teaching see:

The Ethics Tool Database: http://www.bc.edu/bc_org/avp/son/ethics/database.html.

Assessment instruments: <http://www.character.org/resources/assessment>.

Conclusion

The conclusion to this guide to assessment within applied and professional ethics is that there is at present, no reliable conclusion to be drawn regarding the best way to assess ethics learning and teaching. However, there are many tests available, particularly in respect of the measurement of moral reasoning capacity.

What should one assess, and how should one assess it? Neither question has an easy answer, but it is vital that those concerned with ethics learning and teaching, particularly as it concerns professional ethics, continue to debate and develop this vital if contested area.