Carrying out investigations and analysing the information collected



Overview

This unit describes the activities and understanding you will need to carry out investigations and analyse the information collected.

You will need to demonstrate and explain how you do the following.

- 1. Carry out investigations
- 2. Analyse and evaluate research information gathered

The unit is recommended for expedition members undertaking research whilst on expedition.

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Performance criteria

You must be able to:

Carry out investigations

- P1 set up investigations in line with the research plan
- P2 manage relationships with interested parties ethically and according to agreements made1
- P3 use methods, tools, techniques and apparatus consistently and in line with relevant procedures
- P4 document and report fully any unexpected outcomes or incidents and modify the investigation accordingly
- P5 report any delays or problems experienced to all interested parties and give full explanations where possible and adjust the research plan accordingly
- P6 pay proper attention to risks arising from the investigation and take appropriate steps to minimise them
- P7 document fully the details of the investigation and its outcomes in a format suitable for further use
- P8 conduct investigations in line with legal and ethical requirements

You must be able to:

Analyse and evaluate research information gathered

- P9 assess realistically the research information collected for its validity and reliability
- P10 select techniques of analysis and evaluation which are appropriate to the purposes of the research and which are capable of producing valid and reliable results suitable for further use
- P11 apply techniques of analysis and evaluation which are cost effective and can be used within available resources
- P12 confirm the choice of techniques with appropriate colleagues
- P13 collate, record and analyse information accurately to produce justifiable results
- P14 verify the analysis using accepted and valid techniques and in consultation with appropriate people
- P15 record the results of the analysis in full and communicate them to those who need them

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Knowledge and understanding

You need to know and understand:

| K1 | possible risks relating to the various tools and techniques to be used |
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| K2 | ethical issues and regulatory constraints attaching to the conduct of investigations in the field of study |
| K3 | procedures for reporting in case of accidents or other problems |
| K4 | expected outcomes of the investigation |
| K5 | techniques for assessing the reliability of research information |
| K6 | the range of possible techniques for analysing the information and the nature of the results they will produce |
| K7 | the context in which the results will be used2 and its impact on the |

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Additional Information

Scope/range

1. Manage relationships with interested parties ethically and according to agreements made

Researchers must have a clear understanding of the respective roles of all parties interested in the research and should manage their relationships with them accordingly. Ethical management of relationships would include such things as collecting the views of others where appropriate, reporting regularly to sponsors and steering committees and other people who are likely to be affected by the work. It would also include the management of the "grapevine". Researchers must be aware that project participants, research subjects and people in general talk to one another. They should also be aware of the implications which such communication could have for the research. Results and findings are easily misrepresented. Researchers must intervene to manage all communications and prevent gossip.

2. Context in which the results will be used It is important, particularly in the case of larger, collaborative research projects, that researchers provide results which are suitable in their nature and format for interpretation or further use (either by themselves or by others). The form of the results of analysis may differ depending upon which analytical methods and techniques are used.

Links to other NOS

This unit links to SKAD36 Facilitate participants' investigation and understanding of the environment.

This unit is the same as Unit 5 from Semta's suite of National Occupational Standards in Research.

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