BTEC National Diploma in Sport & Exercise Sciences (QCF Level 3)

Unit 5 – Research project for Sport and Exercise

Student Name: ……..

Centre Number: 65355

Unit Goals – By the end of this unit you should:

1. Be able to plan a sport science- or exercise science-based research project
2. Be able to conduct a sport science- or exercise science-based research project
3. Be able to produce a sport science- or exercise science-based research project
4. Be able to review a sport science- or exercise science-based research project

Please relate to this table below throughout the Unit. This table will help you when checking over your work to show you what is required to gain the following grades.

Grading Criteria and Tasks

Task	Pass	Merit	Distinction
Task 1	**P1** **Plan** a sport science or exercise science-based research project	**M1** **Explain** how the selected research design and research methods will ensure that data collection and analysis is valid and reliable	
Task 1 Deadline – 13.02.15			
Task 2	**P2** **Carry out** sport science or exercise science-based research		
	P3 **Collect and record** data from the research project conducted	**M2** **Correctly analyse** collected data, describing techniques used	**D1** **Correctly analyse** data, explaining techniques used
	P4 **Produce** a full research report using a standard scientific structure		
Task 2 Deadline – 13.03.15			
Task 3	**P5** **Carry out** a review of the research project conducted, describing strengths, areas for improvement and future recommendations.	**M3** **Carry out** a review of the research project, explaining strengths, areas for improvement and future recommendations.	**D2** **Carry out** a review of the research project, justifying future recommendations for further research
Task 3 Deadline – 27.03.15			

Unit Content & Key Words

The following words below are key when working through this unit. Please ensure that you are developing your knowledge in these areas so that you will maximise your grade in this unit. (Please tick through these as you complete the unit)

Knowledge Area: 1

Be able to plan a sport science- or exercise science-based research project

Plan: focus; title; aims; objectives; scope; research design; sample; data collection; data analysis; ethical considerations; legal considerations; validity and reliability considerations

Knowledge Area: 2

Be able to conduct a sport science- or exercise science-based research project

Resources: resources needed; considerations, eg availability, booking, arranging, familiarity of researcher with techniques, familiarity of researcher with equipment; recording thoughts and feelings regarding the research process

Ethical and legal issues: informed consent and confidentiality; health screening; data protection; ensuring the welfare and safety of the client throughout the research process, eg child protection, CRB checking, knowledge of operating equipment, ethical clearance for the project

Data: collecting, eg precision, field-based, laboratory-based, use of spreadsheets or databases, interviews, questionnaires, surveys, participant observation; recording, eg rank order, frequency, cumulative frequency, range, transcribing, audio recording, video recording; use of ICT; storage, eg secure storage; analysis, eg opportunity to conduct manual data analysis, qualitative analysis, quantitative analysis, making initial conclusions regarding analysed data

Knowledge Area: 3

Be able to produce a sport science- or exercise science-based research project

Scientific structure of the research report: title page; abstract; general contents page; contents page for figures and tables; contents page for appendices; acknowledgements; introduction; literature review; method; results; discussion and conclusion; references section, eg Harvard; appendices; coherent and well-structured research report; use of ICT

Knowledge Area: 4

Be able to review a sport science- or exercise science-based research project

Review: how well did project conclusions meet project aims; strengths and areas for improvement; evidence; specific examples

Future recommendations: if the project was to be completed again, what would be changed with the project and why; benefits of suggested changes; proposals for further research

We suggest that as you are completing the unit you tick off these key words so that you are aware of what you have completed as well as what you need to do to complete this unit.

Unit Resources

To help complete the Unit, the student will have to undertake research into the information provided by the teacher. Below are some useful resources that can be accessed.

Textbooks

Gratton C and Jones I – *Research Methods for Sport Studies* (Routledge, 2003) ISBN 9780415268783

Silverman D – *Doing Qualitative Research* (Sage Publications, 2004) ISBN 9781412901963

Silverman D – *Interpreting Qualitative Data* (Sage Publications, 2006) ISBN 9781412922456

Vincent W J – *Statistics in Kinesiology* (Human Kinetics Europe, 2004) ISBN 9780736057929

Journals

Journal of Sports Science and Coaching

Journal of Sports Sciences

Peak Performance

Sports Injury

Websites

Sport England	www.sportengland.org/research/
American College of Sports Medicine	www.acsm.org
British Association of Sport and Exercise Sciences	www.bases.org.uk
Human Kinetics	www.humankinetics.com
Sport Science	www.sportsci.org
Top End Sports	www.topendsports.com

Please use this format when completing your **BIBLIOGRAPHY** at the end of each task. Please use more resources, but these above are a starting point!!!

Unit Scenario

You are a newly appointed junior researcher at Sport England. As part of your 3-month probation period for your new job your boss wants you demonstrate your research skills, analytical prowess, creativity and ability to hit a deadline.

This project will give you the opportunity to conduct a dissertation-style project into an area of personal interest within the sport and exercise sciences. You can investigate any topic and this a great opportunity to demonstrate your passion about a specific area of sport and exercise sciences.

To produce a successful project and impress your boss you will need to plan, conduct, disseminate and evaluate the research project within a structured and logical framework. The skills you will demonstrate, develop and refine through the completion of the project (e.g. time management, communication, reflective practice and ICT) will all be transferable to other contexts and working within other departments within Sport England.

Task 1

Planning a research project for sport or exercise

1. To plan your project in sport or exercise you need to decide a **focus, aims and objectives**. This will help to decide the **scope and research design**.

2. Once you have established these factors you can decide the most relevant **sample** size and methods of **data collection and data analysis**.

3. **Ethical considerations and legal considerations** may need attention depending on the sample and design of your project.

4. Last but not least you have to ensure the **validity and reliability of data collection and analysis.**

Produce a written plan for your research project that includes all the information related to the highlighted words from the above paragraph

This provides evidence for **P1**

Merit: In order to gain a merit you should **explain** how the selected research design and research methods will ensure that data collection and analysis is valid and reliable

This provides evidence for **M1**

Task 1	**P1** **Plan** a sport science or exercise science-based research project	**M1** **Explain** how the selected research design and research methods will ensure that data collection and analysis is valid and reliable	
Task 1 Deadline – 13.02.15			

Task 2

Conducting research and producing a report

When conducting your research you need to consider the resources needed:

1. This may include availability, booking, arranging and your familiarity with the required resources.

2. Also you should consider your knowledge of techniques, your familiarity with equipment; recording your thoughts and feelings regarding the research process.

3. Collect and record your data by the most appropriate means making sure that you take into account all legal and ethical considerations.

Produce your project report using standard scientific structure including:

4. Title page; abstract; general contents page; contents page for figures and tables; contents page for appendices; acknowledgements; introduction; literature review; method; results; discussion and conclusion; references section, eg Harvard; appendices.

5. The report needs to be coherent and well-structured with account being taken of your use of ICT.

This provides evidence for **P2, P3, P4**

Merit: In order to get a merit you should correctly analyse collected data, describing techniques used.

This provides evidence for **M2**

Distinction: In order to gain a distinction you should correctly analyse data, explaining techniques used.

This provides evidence for **D1**

Task 2	**P2** **Carry out** sport science or exercise science-based research		
	P3 **Collect and record** data from the research project conducted	**M2** **Correctly analyse** collected data, describing techniques used	**D1** **Correctly analyse** data, explaining techniques used
	P4 **Produce** a full research report using a standard scientific structure		
Task 2 Deadline – 13.03.15			

Task 3

Reviewing the project and providing future recommendations

1. *Review:* how well did the project conclusions meet the project aims highlighting strengths and areas for improvement? Use evidence and specific examples.

2. *Future recommendations*: if the project was to be completed again, what would be changed with the project and why? What would be the benefits of suggested changes and what proposals would you have for further research?

3. *Complete this review in report form or arrange a meeting with your teacher to conduct a verbal review that will be recorded*

This provides evidence for **P5**

Merit: Carry out a review of the research project, explaining strengths, areas for improvement and future recommendations.

This provides evidence for **M3**

Distinction: Carry out a review of the research project, justifying future recommendations for further research

This provides evidence for **D2**

Task 3	**P5** **Carry out** a review of the research project conducted, describing strengths, areas for improvement and future recommendations.	**M3** **Carry out** a review of the research project, explaining strengths, areas for improvement and future recommendations.	**D2** **Carry out** a review of the research project, justifying future recommendations for further research
Task 3 Deadline – 27.03.15			