

**CREATIVE PROBLEM SOLVING FOR SPECIFIC SAFETY HAZARDS WITHIN
SELECTED THEATRE ARTS PRODUCTIONS**

by

MARYNA GERTRUIDA MARIA HATTINGH

**Dissertation submitted in fulfilment of the requirements for the degree
Magister Artium: Drama and Theatre Arts**

in the

**DEPARTMENT OF DRAMA AND THEATRE ARTS
FACULTY OF THE HUMANITIES
UNIVERSITY OF THE FREE STATE
BLOEMFONTEIN**

July 2020

**SUPERVISOR
Prof N. Luwes**

DECLARATION

I, Maryna Gertruida Maria Hattingh, hereby declare that the content of this dissertation that I herewith submit to the University of the Free State is the result of my independent work and that I have never submitted it at any other institution to obtain a qualification. I have acknowledged the persons that assisted me while conducting this study. I declare that this dissertation has been submitted for the first time at this institution towards obtaining a Magister Artium in Drama and Theatre Arts.

I, Maryna Gertruida Maria Hattingh, hereby declare that I am aware that copyright of this dissertation is vested in the University of the Free State.

I, Maryna Gertruida Maria Hattingh, hereby declare that all royalties as regards to intellectual property that was developed during and/or in connection with the study at the University of the Free State will accrue to the University.



Miss MGM Hattingh

July 2020

Date

ACKNOWLEDGEMENTS

I wish to convey my sincere gratitude and appreciation to the following persons who assisted me with the completion of this study:

- ❖ My mother, who helped me through this long journey and supported me through all the rough patches when I wanted to throw in the towel.
- ❖ My four-legged children, Vernon and Magnolia, who comforted me when working late at night.
- ❖ The language editor, Dr Luna Bergh (D.Litt et Phil), University of the Free State, for the final language editing of the dissertation.
- ❖ My supervisor, Prof Nico Luwes (PhD Drama and Theatre Arts), University of the Free State.

25 June 2020

To whom it may concern

This is to certify that I lightly language-edited the MA dissertation of MGM Hattingh manually, excluding references. The author effected the changes. In this way, both linguistic excellence and the author's ownership of her text were ensured.

Sincerely

Dr Luna Bergh

Language and Writing Specialist

TABLE OF CONTENT

	Page
DECLARATION	ii
ACKNOWLEDGEMENTS	iii
DECLARATION FROM LANGUAGE EDITOR	iv
LIST OF APPENDICES	x
LIST OF FIGURES	xi
LIST OF TABLES	xii
LIST OF ACRONYMS	xiii
SELECTED TERMS AND DEFINITIONS	xiv
ABSTRACT	xv

CHAPTER 1: ORIENTATION TO THE STUDY

	Page
1.1 INTRODUCTION	1
1.2 BACKGROUND TO THE RESEARCH PROBLEM	1
1.3 PROBLEM STATEMENT AND RESEARCH QUESTIONS	3
1.4 OVERALL GOAL, AIM AND OBJECTIVES OF THE STUDY	3
1.4.1 The overall goal of the study	3
1.4.2 Aim of the study	4
1.4.3 Objectives of the study	4
1.5 DEMARCATION OF THE FIELD AND SCOPE OF THE STUDY	5
1.6 SIGNIFICANCE AND VALUE OF THE STUDY	5
1.7 RESEARCH DESIGN OF THE STUDY AND METHODS OF INVESTIGATION	5
1.7.1 Design of the study	5
1.7.2 Method of investigation	6
1.8 ARRANGEMENT OF THE DISSERTATION	6

CHAPTER 2: RESEARCH DESIGN AND METHODOLOGY

	Page
2.1 INTRODUCTION	8
2.2 RESEARCH DESIGN	8
2.3 RESEARCH METHODOLOGY	10
2.3.1 Literature study	11
2.3.2 Script analysis	11
2.3.2.1 <i>Theoretical aspects</i>	12

2.3.2.2	<i>Script analysis in this study</i>	13
2.3.2.3	<i>Visual analysis in this study</i>	14
2.3.2.4	<i>Sample selection</i>	14
2.4	ETHICAL CONSIDERATION	14
2.5	CHAPTER 2 CONCLUSION	15

CHAPTER 3: CONCEPTUALISATION AND CONTEXTUALISATION OF HEALTH AND SAFETY IN THE THEATRE

		Page
3.1	INTRODUCTION	16
3.2	GENERAL SAFETY LEGISLATION IN THE THEATRE	16
3.3	GENERAL SAFETY PRINCIPLES	18
3.4	GENERAL HAZARD IDENTIFICATION	19
3.5	THE THEATRE	22
3.5.1	Theatre buildings and safety	22
3.6	DIFFERENT TYPES OF STAGES	23
3.7	THE PROSCENIUM STAGE	24
3.8	THE BACKSTAGE AREA: BEHIND THE PROSCENIUM	25
3.8.1	Stage floor	25
3.8.2	Wagons	25
3.8.3	Traps	25
3.8.4	Revolve	26
3.8.5	Stage drapes	27
3.8.6	The wings and backstage areas	28
3.8.7	Apron	28
3.8.8	Orchestra pit	29
3.8.9	Safety curtain/ firewall	30
3.9	STAGE LIGHTING	31
3.9.1	Lighting equipment	32
3.9.2	Control systems	33
3.9.3	Lighting design and rigging	34
3.9.4	Lighting safety	35
3.9.4.1	<i>Who is responsible?</i>	36
3.10	THE SET	37
3.10.1	Set design	37
3.10.2	Set construction	38

3.10.3	Set up and strike	40
3.10.4	Set construction safety	41
3.10.4.1	<i>Who is responsible?</i>	43
3.11	STAGE PROPERTIES (Props)	43
3.11.1	Props design and construction	44
3.11.2	Organising props for a production	45
3.11.3	Props safety	46
3.11.3.1	<i>Who is responsible?</i>	48
3.12	COSTUMES AND WIGS	48
3.12.1	Costume design	49
3.12.2	Making of the costumes	50
3.12.3	Costume safety	54
3.12.3.1	<i>Who is responsible?</i>	54
3.13	SPECIAL EFFECTS	54
3.13.1	Projections	54
3.13.2	Strobe light effects	55
3.13.3	Smoke or fog	55
3.13.4	Fire	56
3.13.5	Who is responsible?	57
3.14	ACTORS	57
3.14.1	Actors on stage	57
3.14.2	Actors' safety	58
3.14.3	Stage combat and choreography	60
3.14.4	Who is responsible?	62
3.15	SAFETY PRECAUTION AND PROCEDURES IN CASE OF EMERGENCIES IN THE THEATRE	62
3.15.1	Procedures during any emergency evacuation	64
3.16	CHAPTER 3 CONCLUSION	64

CHAPTER 4: SCRIPT ANALYSIS AND DISCUSSION

		Page
4.1	INTRODUCTION	65
4.2	SCRIPT ANALYSIS TECHNIQUE	65
4.3	NOISES OFF (2001)	66
4.3.1	<i>Script analysis of Noises Off (2001)</i>	67
4.3.2	<i>Noises Off (2001) director's script breakdown</i>	70
4.3.3	<i>Noises Off (2001) safety hazard analysis</i>	75

4.4	MACBETH (1606)	76
4.4.1	Script analysis of <i>Macbeth</i> (1606)	77
4.4.2	<i>Macbeth</i> (1606) director's script breakdown	79
4.4.3	<i>Macbeth</i> (1606) safety hazard analysis	83
4.5	DOGG'S HAMLET (1979)	84
4.5.1	Script analysis of <i>Dogg's Hamlet</i> (1979)	85
4.5.2	<i>Dogg's Hamlet</i> (1979) director's script breakdown	87
4.5.3	<i>Dogg's Hamlet</i> (1979) safety hazard analysis	89
4.6	CHAPTER 4 CONCLUSION	90

CHAPTER 5: VISUAL DEDUCTION OF THE PERFORMANCES

		Page
5.1	INTRODUCTION	91
5.2	VISUAL ANALYSIS TECHNIQUE	91
5.3	NOISES OFF (2018)	92
5.3.1	Pre-production of <i>Noises off</i> (2018)	93
5.3.2	Rehearsals and plotting of <i>Noises off</i> (2018)	95
5.3.3	Performance of <i>Noises Off</i> (2018)	99
5.4.	MACBETH (2013)	100
5.4.1	Pre-production of <i>Macbeth</i> (2013)	100
5.4.2	Rehearsals and plotting of <i>Macbeth</i> (2013)	101
5.4.3	Performance of <i>Macbeth</i> (2013)	103
5.5	DOGG'S HAMLET (2019)	104
5.5.1	Pre-production of <i>Dogg's Hamlet</i> (2019)	104
5.5.2	Rehearsals and plotting of <i>Dogg's Hamlet</i> (2019)	105
5.5.3	Performance of <i>Dogg's Hamlet</i> (2019)	108
5.6	CHAPTER 5 CONCLUSION	108

CHAPTER 6: CONCLUSION, RECOMMENDATIONS AND LIMITATIONS OF THE STUDY

		Page
6.1	INTRODUCTION	109
6.2	OVERVIEW OF THE STUDY	110
6.2.1	Research question 1	110
6.2.2	Research question 2	110
6.2.3	Research question 3	113

6.3	TRUSTWORTHINESS: CREDIBILITY, DEPENDABILITY, CONFIRMABILITY AND TRANSFERABILITY	115
6.3.1	Credibility	115
6.3.2	Dependability	115
6.3.3	Confirmability	116
6.3.4	Transferability	116
6.4	LIMITATIONS OF THE STUDY	116
6.5	RECOMMENDATIONS FOR FUTURE STUDY	117
6.6	CONCLUDING REMARKS	117
	REFERENCE LIST	118
	APPENDICES	

LIST OF APPENDICES

APPENDIX A WYNAND MOUTON THEATRE EVACUATION PLAN

LIST OF FIGURES

	Page
FIGURE 2.1 THE CYCLE OF THE RESEARCH DESIGN	10
FIGURE 3.1 HIERARCHY OF CONTROL	20
FIGURE 3.2 THE PARTS OF A PROSCENIUM STAGE	24
FIGURE 3.3 STANDARD HANGING POSITION FOR STAGE DRAPERIES	27
FIGURE 3.4 IMAGE OF THE ROPE BOX AND AXE IN THE WYNAND MOUTON THEATRE (UFS)	31
FIGURE 3.5 A SCISSOR LIFT	32
FIGURE 3.6 SCAENA THEATRE LIGHTING PLAN (UFS)	34
FIGURE 3.7 LEARNING STRATEGIES TO IMPLEMENT SAFETY CONSCIOUSNESS	58
FIGURE 5.1 FRONT SET IMAGE OF <i>NOISES OFF</i>	93
FIGURE 5.2 BACK SET IMAGE OF <i>NOISES OFF</i>	94
FIGURE 5.3 1 ST IMAGE OF THE REVOLVE STAGE DESIGN	94
FIGURE 5.4 2 ND IMAGE OF THE REVOLVE STAGE DESIGN	94
FIGURE 5.5 IMAGE OF THE COMPLETED REVOLVE STAGE	95
FIGURE 5.6 IMAGE OF THE TOP STEP	97
FIGURE 5.7 IMAGE OF GARRY AND FREDDY FIGHTING ON THE STAIRS	98
FIGURE 5.8 IMAGE OF <i>MACBETH</i> SET	100
FIGURE 5.9 SCREENSHOT OF THE WITCHES SCENE	102
FIGURE 5.10 IMAGE OF <i>DOGG'S HAMLET</i> SET 1	104
FIGURE 5.11 IMAGE OF <i>DOGG'S HAMLET</i> SET 2	104
FIGURE 5.12 IMAGE OF THE CRATES USED IN <i>DOGG'S HAMLET</i>	107
FIGURE 5.13 IMAGE OF BOXES USED IN <i>DOGG'S HAMLET</i>	107

LIST OF TABLES

	Page
TABLE 4.1 DIRECTOR'S SCRIPT BREAKDOWN OF <i>NOISES OFF</i>	70
TABLE 4.2 DIRECTORS SCRIPT BREAKDOWN OF <i>MACBETH</i>	79
TABLE 4.3 DIRECTORS SCRIPT BREAKDOWN OF <i>DOGG'S HAMLET</i>	87
TABLE 5.1 VISUAL DEDUCTION OF <i>NOISES OFF</i> ACT 1, 2 AND 3	96
TABLE 5.2 VISUAL DEDUCTION OF <i>MACBETH</i> ACT 1, 2, 3, 4 AND 5	101
TABLE 5.3 VISUAL DEDUCTION OF <i>DOGG'S HAMLET</i> ACT 1	106

LIST OF ACRONYMS

BCE	: Before Common Era
FOH	: Front of house
MSDS	: Material Safety Data Sheet
NOSA	: National Occupational Safety Association
OSH Act	: Occupational Health and Safety Act
SH	: Safety Hazards
SM	: Stage Manager
UFS	: University of the Free State
PPE	: Personal Protection Equipment

SELECTED TERMS AND DEFINITIONS

ACCIDENT – An undesired event that causes damages or injury (Harms-Ringdahl, 1993:1).

FARCE – A farce is a dramatic composition paired with satirical comedy and an implausible plot (Merriam-Webster.com Dictionary, n.d).

HAZARD – A source of-or exposure to danger (OSH Act no. 85 of 1993).

MASK – To block the backstage equipment from the view of the audience (Gillette, 2008: 65).

ORCHESTRA PIT – Below stage level, that holds the orchestra, between the stage and auditorium (Gillette, 2008: 51).

PICTURE FRAME STAGE – The audience watches a performance through a rectangular opening. A synonym for the proscenium-arch stage (Gillette, 2008: 51).

RESPONSIBLE PERSON – The person in charge of the technical activities on stage, for instance, the stage manager (Nel, 2001b:7).

RISK – The probability that injury or damage will occur (OSH Act no. 85 of 1993).

SHOW PORTAL – A false proscenium that is designed for a specific production (Gillette, 2008: 67).

SLAPSTICK – Slapstick comedy is a type of performance in which the actors behave physically and foolishly (Collins dictionary, n.d.)

THEATRE – A building, room or formerly an outdoor structure for the presentation of plays, motion pictures or other dramatic performances (Morris, 1973:1333).

TRAVEL – To move horizontally in relation to the stage floor (Gillette, 2008: 65).

ABSTRACT

Key terms: *Dogg's Hamlet*, *Macbeth*, *Noises off*, Safety hazards, Theatre industry, Qualitative design, Case study, Text analysis, Visual analysis, Theatre accidents.

The purpose of this dissertation was to outline the potential safety hazards that can occur during the pre-production and performance phase in the backstage areas of the theatre and onstage. Three texts *Noises off*, *Macbeth* and *Dogg's Hamlet*, are analysed using the script analysis technique to determine what possible safety hazards can be found in the texts. The researcher performs a visual analysis to identify how the potential safety hazards can be creatively solved during the pre-production, rehearsal and performance stages of the plays.

By means of a literature study, an in-depth study of the relevant literature on all aspects of theatre safety, and the MA and PhD degrees of Nel formed an essential basis of the research. The researcher focused on set construction, lighting, props, costumes, and the action of the actors on stage. The processes and procedures of each backstage area were discussed, and recommendations on the avoidance of safety hazards were given.

The texts of *Noises off* (2001), *Macbeth* (1606) and *Dogg's Hamlet* (1979) were analysed from a technical viewpoint with the researcher focusing on the set construction, handling of props, stage combat and actors movements. The potential safety hazards were discussed and listed in grids along with the specific scene. Firstly, *Noises off* was analysed with the focus on set design and construction along with actors movements as possible safety hazards. Next, *Macbeth* was analysed with the focus on stage combat and the use of props as potential safety hazards. Lastly, as with *Macbeth*, *Dogg's Hamlet* was analysed with the emphasis on the use of props and stage combat as possible safety hazards.

The visual analysis of *Noises off* (2018), *Macbeth* (2013) and *Dogg's Hamlet* (2019) were conducted based on the text analysis previously done. The focus was on the pre-production, rehearsal and performance stages of the three plays to determine how the potential safety hazards were creatively solved and avoided. The solution to the identification of safety hazards was also listed in a grid format with the text analysis and visual analysis listed side by side. With careful planning and rehearsals, safety hazards could be avoided. The actors' movements and fight scenes were the most hazardous activities, but the actors overcame those hazards with safety consciousness.

In conclusion, the method applied in this study and the research findings can be applied as a basis for analysing play texts and specifically identifying possible safety hazards. This dissertation also provides ideas on how to creatively prevent and solve the hazards found to ensure the safety of all participants in production.

CREATIVE PROBLEM SOLVING FOR SPECIFIC SAFETY HAZARDS WITHIN SELECTED THEATRE ARTS PRODUCTIONS

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Brockett and Ball (2011:3) state that the theatre industry is over twenty-five hundred years old. Barba (2002:13) describes theatre as an industry governed by constraints such as time, money, space and collaborators. Brocket and Ball (2011:5) add to Barba by pointing out that certain elements are needed for a theatre, such as a performance space, a set, performers or actors, masks/ makeup, costumes, music, dance and an audience. A theatre comprises of three essential elements; namely the script, the actors and the audience. Thus it can be described as A performing B for C (Brocket and Ball, 2011: 6). Furthermore, the creation of performances will require a creative team, which includes a playwright, director, actors, designers and technical staff (Brocket and Ball, 2011: 6).

Recently, health and safety in the workplace became more critical because of the number of new rules and regulations that are being enforced. Legislation such as the Occupational Health and Safety Act no 85 of 1993, came into effect and workplaces have to comply with it to ensure the safety of employees. Theatres are no exception, and because of the different activities that are part of preparing for a show and while the show is running, may pose safety hazards, it is imperative to know the potential dangers. The researcher identified some of the safety hazards in set design and construction. The use of props, and the movements of actors during the study of the three plays that were staged by the Department Drama and Theatre Arts of the University of the Free State (UFS) (*Noises off* {2001} and *Dogg's Hamlet* {1979}) and the Dubai American Academy (*Macbeth* {1606} video performance).

1.2 BACKGROUND TO THE RESEARCH PROBLEM

A dramatic arts theatre is a unique venue with special safety hazards due to the technical and artistic activities taking place in the space. Technical departments such as props making, set construction, costume design and production, face a variety of safety hazards.

As Strong (2010:69) points out, theatres are fundamentally factories that manufacture performances with an atmosphere of creativity, collaboration and joy.

According to Carver (2013:126-127), some typical safety hazards in all theatres are working at heights, improper attire (loose clothing, sandals or loose hair), horseplay or practical jokes, blocked or locked exits, unrecorded accidents and loose cables. The violation of safety precautions related to these hazards may result in bruises, broken bones, losing of limbs or even death in severe cases. Many other hazards can be found in the theatre environment, such as working with chemical substances and the use of machinery during the building of sets.

The purpose of the Occupational Health and Safety Act, 85 of 1993 (OSH Act) is to protect workers from safety hazards while they are working. This Act applies to most workplaces in South Africa, except the mining industry and working at sea - as those two entities have their own specifically designed legislation to cover their unique circumstances (RSA, Occupational Health and Safety Act, 1993: section 2). According to Section 9 of the OSH Act (1993), it is the duty of the employer or self-employed person to ensure that, as far as it is reasonably practicable, the environment where others work is safe from hazards. Section 14 of the OSH Act (1993) declares that it is the duty of every person at the workplace to report unsafe practices and situations.

Despite regulation, accidents in theatres still happen. Just before a Broadway performance of *The Little Mermaid* in 2008, an actor fell almost forty feet down to the stage below through an unlocked trapdoor and fractured his back, pelvis, sternum, ribs, wrists and foot (Day, 2013:1311). During 2010, before rehearsals for the Broadway show, *Spider-Man: Turn Off the Dark* began, an actor gave a demonstration of a flying scene on October 28 but landed so hard on his hands that he broke both wrists. This show had eight serious injuries during rehearsals and performances (Day, 2013:1313-1315).

Another severe incident in the same production happened to Christopher Tierney. He fell from a platform into the orchestra pit and fractured four ribs, an arm and scapula and several vertebrae. He also suffered a bruised lung, a hairline skull fracture and internal bleeding (Day, 2013:1313-1315). Tierney was supposed to jump from a height while he was fastened to a rope that was attached to the stage. The rope was not appropriately secured, and the actor fell into the orchestra pit. Accidents like this illustrate the importance of safety measures that must be in place and continuously checked by a qualified safety specialist.

1.3 PROBLEM STATEMENT AND RESEARCH QUESTIONS

Based on a literature search, very little structured research has been undertaken to identify possible Safety Hazards (SH's) that focus on specific texts to prevent potential accidents during the pre-production, rehearsal and performance stages of these particular plays. Nel completed his master's degree, *Veiligheid in die teater*, in 1992 at the then Technicon of Pretoria. Nel's study concentrates more on the legislation regarding theatre safety than on actual hazard identification in specific plays. This was the only study in the South African context on theatre safety found so far, and some of the information was informative for this study. The researcher believes that creative problem solving is the key to eliminate safety hazards and for creating a safe working environment for the technical personnel, actors, and audience members.

The objectives of the study will address the following research questions:

- What potential safety hazards and preventive measures are there in the back- and onstage areas of a theatre during pre-production, rehearsals and performances?
- What potential safety hazards can be identified in the texts of three plays; namely, *Noises off* (2001); *Macbeth* (1606) and *Dogg's Hamlet* (1979)?
- How were the possible safety hazards, identified within the texts of the three analysed plays, creatively solved during the pre-production, rehearsal phases and in the final performances?

1.4 OVERALL GOAL, AIM AND OBJECTIVES OF THE STUDY

1.4.1 The overall goal of the study

The overall goal of the study is to outline what potential safety hazards can occur in the back- and onstage areas of a theatre during the pre-production phase. Three texts namely, *Noises off* (2001), *Macbeth* (1606) and *Dogg's Hamlet* (1979), will be analysed using the script analysis technique to identify what possible safety hazards can occur, and how these potential hazards were creatively solved during the pre-production, rehearsals and the performances of the plays by using designs, photos and videos of the performances.

1.4.2 Aim of the study

This study aims to serve as an example of the techniques and procedures that can be followed to identify and prevent SH's in the theatre in other future productions.

Firstly, the study will determine what kind of general SH's can be identified and might occur in the back- and onstage areas of a theatre during the pre-production phase (such as set and props construction, move-in, and the setting of lights). Then, SH's in the rehearsal period (including plotting, choreography, stage fights, and the use of props) are investigated, and general procedures that need to be followed to avoid the hazards in pre-production and rehearsal stages are discussed.

Secondly, each production text might require attention to specific possible SH's during the pre-production, rehearsal process and performance stages. The aim is to analyse and determine specific possible SH's in three play texts, namely, *Noises off* (2001), *Macbeth* (1606) and *Dogg's Hamlet* (1979).

Thirdly, an investigation into the visual material (such as designs, sets, props, lights, plotting, choreography, and photos and videos) of these past productions will be undertaken to identify, indicate/demonstrate and describe how these specific identified hazards in the texts were creatively overcome by designers, technical staff, directors, choreographers and actors during the pre-production, rehearsals and the performances of the plays.

1.4.3 Objectives of the study

The purpose of the study will be achieved by reaching the following objectives:

- Conceptualise from a comprehensive literature study how the back- and onstage areas of a theatre operates for the identification of possible SH's and the preventive measures to avoid accidents. (**Comprehensive literature study**)
- Determine the possible SH's that are present within the texts of three specific plays, namely, *Noises off* (2001), *Macbeth* (1606) and *Dogg's Hamlet* (1979). (**Text analysis**)
- Determine how these hazards were creatively solved by analysing the visual material (including designs, photos and videos) of the three productions during the pre-production, rehearsal stages and final performances of the plays. (**Visual deduction**)

1.5 DEMARCATION OF THE FIELD AND SCOPE OF THE STUDY

This study identifies factors for effective prevention of SH's in theatre productions using an investigation into typical SH's in the back- and onstage areas of a theatre. Specific possible SH factors are identified in three play texts through text analysis. Visual material (for example, videos, designs and photos) of the three performances are analysed to identify how the specific SH challenges of the three plays were overcome during the pre-production, rehearsal and performance phases on stage by the theatre staff and artistic staff involved in the final productions.

The study was conducted between March 2019 and July 2020.

1.6 SIGNIFICANCE AND VALUE OF THE STUDY

This study aims to enlighten technical theatre personnel, students, lecturers, scholars, academics, actors and audience members about the common safety hazards found in the different areas of the theatre; and awareness will be created about the importance of hazard identification while working on productions. The study could also be of value for technical theatre personnel, future directors, designers and theatre practitioners as it will provide a systematic example on how research can be undertaken to identify specific SH's in future productions to ensure safety and prevent accidents.

1.7 RESEARCH DESIGN OF THE STUDY AND METHODS OF INVESTIGATION

1.7.1 Design of the study

The research design can be referred to as the research strategy or strategy of inquiry (Botma, Greeff, Mulaudzi and Wright, 2014:189). This study follows a qualitative research design. The research methodology for this study consists of a literature study followed by the case study method. This study is qualitative in design and will focus on two productions done by the University of the Free State (UFS) and one production performed by the Dubai American Academy.

A more detailed description of the qualitative design of the study can be found on page 9 in Chapter 2.

1.7.2 Method of investigation

Two research techniques, namely a literature study and case study, are applied by the researcher and forms the basis of the study.

The literature study consists of a general overview of the identification of SH's, and the prevention measures to avoid accidents in the back- and onstage areas of the theatre during pre-production, rehearsal and the final performance stages.

The texts of the three plays, *Noises off*, *Macbeth* and *Dogg's Hamlet*, will be analysed, using Thomas's (2009) script analysis method, to identify what possible safety hazards can occur during each production.

The visual material of the performed productions of the three selected plays will be analysed to identify the creative ways in which designers, technical staff, the director and actors overcame possible safety hazards identified from the texts in the pre-production, rehearsals and the final performances.

1.8 ARRANGEMENT OF THE DISSERTATION

In this chapter, Chapter 1, **Orientation to the study**, the background to the study was provided, and the research problem, including the research questions, was stated. The overall goal, aim and objectives were stated, and the research design and methods that were used were briefly discussed to give the reader an overview of what the dissertation contains.

In Chapter 2: **Research design and methodology**, the research design and methodology for the literary study (Creswell, 2014), the text analysis (Thomas, 2009), and descriptive case study analysis (Creswell, 2014) applied, are discussed in detail.

In Chapter 3: **Conceptualisation and contextualisation of safety in the theatre**, this section will consist of a literature study for the identification of typical and possible safety hazards and preventive measures within the back- and onstage areas during the pre-production, rehearsal, and performance phases of the production according to the seminal research by Nel (1992) in the field of theatre safety.

In Chapter 4: **Script analysis**, the three plays, *Noises off* (2001); *Macbeth* (1606) and *Dogg's Hamlet* (1979) are analysed from a technical point of view, to determine what possible SH's could be identified or arise during the pre-production, rehearsals and performances in the readings of the texts.

In Chapter 5: **Visual deduction of the performances**, the visual material of the productions will be analysed to identify how the possible safety hazards identified in the text analysis was creatively overcome during the rehearsal period and in the final performances.

In Chapter 6: **Conclusion, recommendations and limitations of the study**, a conclusion will be reached by reflecting on the results obtained from the above-mentioned chapters. Recommendations and limitations regarding the study will also be discussed.

CHAPTER 2

RESEARCH DESIGN AND METHODOLOGY

2.1 INTRODUCTION

Chapter 1 provided an orientation to the study. It included an overview and background to the research problem, a summary of the problem statement, research questions, overall goal, aim and objectives of the study. The field and scope of the study were demarcated together with its significance, value as well as a summary of the research design and method of investigation. The researcher included a schematic outline of the study and an overview of the report.

This chapter will describe the research design and research techniques that will be applied in this study. Firstly, the theoretical perspectives on qualitative research will be discussed, followed by a detailed discussion of the case study method and script analysis technique and a similar technique to analyse the visual material of these productions.

2.2 RESEARCH DESIGN

The research design provides a plan for the implementation of the study (Botma *et al.*, 2014:108). According to Creswell in Botma *et al.* (2014:189), a research design is usually qualitative, quantitative or mixed methods in nature. A qualitative research design aims to determine behaviours, attitudes, social processes and experiences that cannot be investigated through quantitative research (Skinner, 2007). Quantitative research is a systematic process using numerical data from a selected subgroup of a universe to generalise the findings of the universe being studied (Maree, 2016:162). A mixed-method research design combines qualitative and quantitative technique collecting both numeric and text data concurrently or in a sequence to answer the research question (Maree, 2016:312).

For this study, the researcher will apply a qualitative case study research design to fit the aim of this study; namely to identify possible safety hazards and creative solutions in the three texts of the identified productions. The researcher will apply an inductive reasoning process to build concepts and theories, instead of deductively testing a hypothesis, as explained by Merriam and Tisdell (2016:17). Inductive reasoning begins at specific

principles with the aim to generalise principles. Qualitative researchers derive their findings from the data in the form of themes, categories and sub-categories about a specific aspect of the practice (*ibid*). The inductive reasoning process is transparent and reliable, and all investigations are informed by discipline-specific information that enables the researcher to focus their inquiry and interpret the data (Nicholls, 2009:531-532).

The qualitative research design allows researchers to explore the perceptions, institutional cultures, reasons for success and failures of interventions or practices in depth (Ramani and Mann, 2016:38).

The primary goal of the qualitative researcher is to explore and understand the experiences of their participants (Ramani and Mann, 2016:38). The qualitative researcher attempts to understand instead of explaining. This technique is applied when little is known about the topic, or as stated above, the subject is not quantifiable (Botma *et al.*, 2014:182). There are different forms of qualitative research; such as conceptual studies that are mainly based on secondary sources and critically engage with the literature to add to the existing body of knowledge. Another form of qualitative research is historical research, where historical information from designated sources are described, analysed and interpreted. Case study research is a thorough inquiry into an activity, program or process to describe a specific phenomenon of interest (Nieuwenhuis, 2014:70-75).

De Vos, Strydom, Fouche and Delport (2011:302) state that the first steps in research are selecting a research topic rooted in a body of theory. The literature the researcher uses serves four essential functions:

1. It gives the underlying assumptions behind the research question.
2. It shows that the researcher knows the subject.
3. It shows the gap the researcher identified.
4. It refines the research question(s) posed by the researcher.

In this study, a case study procedure will be applied to identify and describe the safety hazards in two different theatre productions by the Department of Drama and Theatre Arts of the University of the Free State and one production by the Dubai American Academy. These productions were chosen based on the requirement of the text regarding the set design, actors movements and props being used. All three performances were student production with *Noises off* (2001) performed by the third-year students, *Macbeth* (1606) performed by the second-year students and *Dogg's Hamlet* (1979) performed by students from the Dubai American Academy as the University of the Free State did not perform

Macbeth. For this particular study, the researcher undertakes a literature study on safety in the theatre and script analysis techniques. This is followed by the actual script analysis of the three theatre texts and the visual examination of the productions of the three texts to, firstly, identify possible SH's in the texts, and secondly, how the SH's were coped with and avoided in the productions.

2.3 RESEARCH METHODOLOGY

Hammell, as quoted by Nicholls (2009:586), describes a methodology as “a specific philosophical and ethical approach to developing knowledge; a theory of how research should, or ought to proceed given the nature of the issue it seeks to address”.

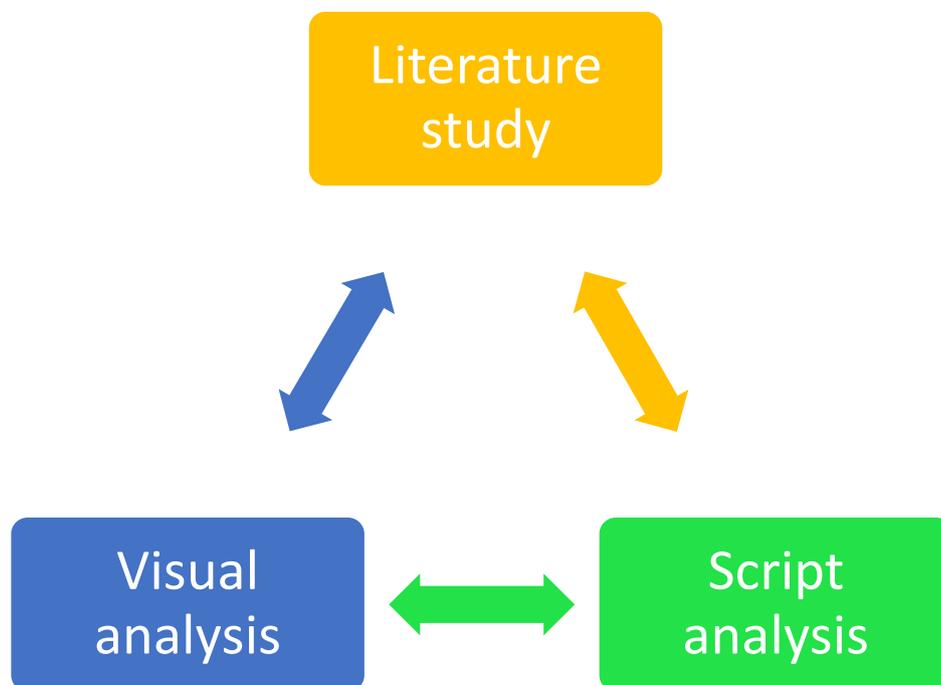


FIGURE 2.1: THE CYCLE OF THE RESEARCH DESIGN
(Compiled by Hattingh, 2020).

Three data collection techniques that hinge on each other will be applied in this study; namely, the literature review, script analysis and video analysis, as explained in the next section. Information on the techniques of data collection, data analysis and ethical consideration of the study will be discussed below.

2.3.1 Literature study

Research is undertaken within an existing knowledge base to show that the researcher had critically reviewed the existing literature. The literature study provides a conceptual and contextual framework for the research and reflects research done by recognised researchers in this field; such as J. Nel (1992), R.K. Carver (2013) and others. Mostly primary sources will be used while compiling the literature study (Botma *et al.*, 2014:63-65).

During preliminary research, the electronic databases investigated to search for additional visual information were search engines made available by the University of the Free State, such as JSTOR. Valuable information, including video-clips on safety precautions in the theatre, were found and will inform this study in Chapter 3. Some of these video-clip sources include *Tech Theatre Safety: Lighting And Rigging* by Niaymelanin (2016), *Technical Theatre - Shop Safety* by W. Armstrong (2016), and *Tech Theatre Safety Video* by Shayla and Sophia (2014), to mention but a few. Some of the articles used included, *An introduction to stage properties* by T. Thrice (2017), and *The stage and sets* by B. Sims (2011), to mention but a few.

According to Grinnell and Unrau in de Vos, *et al.* (2011:109), the main reason why a literature study must be undertaken is to convince reviewers that the researcher understands the present concerns associated with the topic.

The extensive literary study in Chapter 3 will bring an informed and sound understanding of the problem that identified by the researcher. Chapter 3 will focus on and describe the relevant existing knowledge on safety in the theatre and what research has already been conducted on the topic.

2.3.2 Script analysis

The researcher will apply script analysis techniques of *Script Analysis for Actors, Directors and Designers* by J. Thomas (2009) in Chapter 4, to analyse the text of the three plays to identify the possible safety hazards that can occur during the pre-production, rehearsal and performance stages. Thomas's script analysis technique is commonly used specifically in the theatre, which makes it easy to use in this study. When looking at a text, the composition is critical because the play must have all the elements to create a whole (Monday, 2017:1). Script analysis is the most common method to unpack a script and find the essence of the text or the message the author wants to get across.

2.3.2.1 Theoretical aspects

Script analysis is not new; as it has been used since the time of Aristotle, who introduced his theory on the theatre, and is considered the *Father of Western Philosophy* (Kiely, 2016:4). Today, we still use Aristotle's method of script analysis when reading a new script. Thomas (2009) indicates that Aristotle divided drama into six elements; namely plot, character, dialogue, idea, music and production values.

According to Thomas (2009:1-229), there are ten aspects an artist needs to keep in mind when analysing a play:

1. **Action analysis** – Action analysis focuses mostly on the plot, with little focus on the other elements of a play (Thomas, 2009:1).
2. **Given circumstances** – Thomas (2009:39) explains that the given circumstances of the play refer to the specific conditions in which the action of the play occurs.
3. **Background story** – The exposition of the play gives the viewers insight into the background of the characters since their lives begin long before they appear on stage (Thomas, 2009:70).
4. **External and internal action** – External action, according to Thomas (2009:94), refers to the plot and the physical movements of the characters. In contrast, internal action refers to the inner turmoil of the characters.
5. **Progression and structure** – Progression gives the reader/viewer the impression that the plot or characters are moving forward, while the structure is the arrangement of the plot and how each scene relates to the other scenes (Thomas, 2009:129-141).
6. **Character** – Thomas (2009:168) considers character as the pattern of action that identifies a person.
7. **Idea** – Idea refers to the meaning of the play; the thing that lays the basis for effective communication between the creative team (Thomas, 2009:201).
8. **Dialogue** – Dialogue refers to the conversation that takes place amongst the characters (Thomas, 2009:229).
9. **Tempo, rhythm and mood** – Tempo, rhythm and mood combined is what Aristotle referred to as music. The tempo is the timing and speed from one word to another word between two characters or the action that is happening on stage (Monday, 2017:2). Rhythm is the pattern the events occur in, as well as the dramatic intensity that rises and falls (*ibid*). Lastly, Thomas (2009:279) adds that mood refers to the feeling of a particular character.

10. **The style of the play** – The style of the play refers to the historical period in which the play is set, but also the style the plot is written in, for example, tragedy or comedy (Thomas, 2009:287).

According to Twijnstra and Durden (2014:72), Aristotle also created a list of elements needed to create a strong dramatic reaction in the audience:

1. The characters
2. A plot
3. Thought behind the drama
4. The actors
5. A set
6. Music
7. Movement
8. Costumes

2.3.2.2 Script analysis in this study

The researcher will apply the script analysis technique and will focus more specifically on potential SH's in the texts, for example, the technical aspects such as the set design, use of props and the movements of the actors in each text of the three plays. First, the researcher would read the texts several times to ensure that the meaning, plot, structure, genre and style of the texts are understood. Notes on possible safety hazards in the full texts were noted down preliminary. In the second step, the researcher divided the texts into scenes to make the analysis and identification of possible safety hazards in specific scenes easier. Thirdly, the researcher compiled and organised the facts of the plays into action analysis, given circumstances, external action and structure. Lastly, from the organised facts, the researcher compiled a list of potential safety hazards that could be present in the texts.

In *Noises off*, special attention is given to set design and movement of the actors, while in *Macbeth*, special attention will be given to the movement of the actors during the fight scenes and the uses of some of the more dangerous props. Lastly, in *Dogg's Hamlet* as with *Macbeth*, the researcher paid particular attention to the movement of the actors and the use of dangerous props.

2.3.2.3 Visual analysis in this study

For the visual analysis, the researcher followed a similar method, as described in the script analysis technique and adjusted the technique to suit a visual analysis as opposed to script analysis. First, the researcher watched the videos of the performances, took notes on the set, props requirements and of actor's movements for each production. The researcher will study photos and, when obtainable, blueprints of the set, to analyse the visual materials to determine how the possible safety hazards (as identified by the script analysis) was creatively solved to ensure the safety of the actors and technical staff.

2.3.2.4 Sample selection

For this study, the researcher selected two different plays that have been performed by the Drama and Theatre Arts Department at the University of the Free State; namely *Noises off* directed by Thys Heydenrych in 2018 and *Dogg's Hamlet* directed by Dion van Niekerk and DeBeer Cloete in 2019. The third play is *Macbeth*, directed by Pdraig Downey in 2013 and performed by the Dubai American Academy. These plays were chosen specifically because of their technical requirements. *Noises off* (2001) by Michael Frayn was selected for its elaborate set design and the action happening on stage (lots of doors opening and closing as well as actors running up and down the stairs). The researcher chose *Macbeth* (1606) by William Shakespeare because of its stage combat and the use of dangerous props. Lastly, the researcher chose *Dogg's Hamlet* (1979) by Tom Stoppard for the use of the theatre building as a set and the fact that some scenes in the production take place in darkness on stage. The playtext also requires possible dangerous special effects and intricate choreography in the stage production. It must be noted that the directors of the three plays had the usual artistic freedom to adapt the prescriptions in the didascalia of the texts according to their artistic visions for the productions. These adaptations in the final productions might indicate measures taken by the designers, directors and choreographers to ensure safety and will be described in the conclusion of the study.

2.4 ETHICAL CONSIDERATION

Approval for the research project was obtained from the General Human Research Ethics Committee (GHREC) so that the researcher could continue with the study.

Final approval was obtained on 15 November 2019 with approval number of the UFS-HSD2019/1831.

2.5 CHAPTER 2 CONCLUSION

In this chapter, the research design and methodology were discussed in detail. The researcher explained the process followed during the literature study, as well as the script- and visual analysis process that will be applied to the three selected plays and their productions.

The next chapter, Chapter 3, entitled **Conceptualisation and contextualisation of safety in the theatre**, focus on the relevant literature regarding theatre safety.

CHAPTER 3

CONCEPTUALISATION AND CONTEXTUALISATION OF DIFFERENT ASPECTS IN THE THEATRE

3.1 INTRODUCTION

The research methodology applied in this study was explained and motivated in Chapter 2. It included an overview of the qualitative research design as well as outline the script- and visual analysis techniques applied in this study.

This chapter, firstly, explains the general functioning and purposes of the areas and activities taking place in the backstage areas of a theatre, including the possible safety hazards in these areas. The information discussed in this chapter looks into the identification of the specific potential safety hazards in the analysis of the three texts; namely *Noises off*, *Macbeth* and *Dogg's Hamlet*, in Chapter 4. In the video and visual analysis in Chapter 5, the focus is on how the identified possible Safety Hazards were prevented or overcome in the three productions.

Theatre experts, such as Carver (2013), Gillette (2008), Rossol (1991; 2001), Nel (1992; 2001), and others have conducted international research on theatre safety. The researcher ascertained that more contemporary research needs to be conducted in South Africa regarding theatre safety.

Since each production brings unique safety hazards to the theatre, apart from those incorporated in the building, theatre staff and actors must understand the importance and functions of the different areas and what safety hazards there may be. In this way, they can focus more in-depth on securing a safe production, not only for themselves but also for the audience.

3.2 GENERAL SAFETY LEGISLATION IN THE THEATRE

When people think about safety, the first thought is about legislation. Whether it is in the theatre or any other industry, somewhere, there will be a law to guide the safety procedures. The entertainment industry, like any other industry, falls under the Occupational Health and Safety Act, no 85 of 1993 in South Africa.

For all events, an event safety and security planning committee must be established to determine the risk categories and to coordinate the function in terms of safety. For example, at the Wynand Mouton Theatre (UFS), all staff undertook a course in health and safety, basic firefighting and evacuation procedures presented by the University of the Free State. Every production in a theatre must also adhere to the Occupational Health and Safety Act, no 85 of 1993.

The Occupational Health and Safety Act, no 85 of 1993, protects employees and people who are not employees against hazards to their health and safety arising out of or in connection with activities that happen at work or because of what employees did or omitted to do and then jeopardise the safety and health of others (South Africa, 1993). This legislation paves the way for safety principles that applies to any industry.

The Health and Safety Executive (n.d.:2) in the UK states that four legal duties are focused on regarding health and safety in the theatre; namely the employer, the employee, the self-employed (freelance), and the people in charge of premises. This legislation is not in full specifically applicable to the theatre, but sections of the Act can be applied to the theatre. In South Africa, the Occupational Health and Safety Act, no 85 of 1993 does cover the employer and employee (as given in the paragraphs below). Still, according to the Act, the self-employed refers to those who have their own businesses, not freelancers, who are classified as independent contractors. Du Toit, Bosch, Woolfrey, Godfrey, Cooper, Giles, Bosh and Rossouw (2008:75) state that the typical employee works for a single employer and receives regular remuneration, while an independent contractor performs a specific service for a fee and does not work for a single employer.

According to Section 8 of the Occupational Health and Safety Act, no 85 of 1993 (South Africa, 1993:6), the employer must provide an environment that is safe and without risk to their employees. They must provide and maintain a system of work, plant and machinery that is safe and without risk; eliminate or mitigate any potential hazards; and provide information, instruction, training and supervision to ensure the health and safety of their employees. The employer will also not permit any employee to do any work, or handle any articles or substances without appropriate training (South Africa, 1993:6).

Section 14 of the Occupational Health and Safety Act, no 85 of 1993 (South Africa, 1993:8) stipulates that every employee must take responsible care regarding the health and safety of himself/ herself and others who may be affected by their actions and cooperate with the employer. The employee will carry out any lawful order given to them, obeying the health

and safety rules and procedures in place and must report any unsafe situation to the employer no later than the end of his shift during which the incident occurred (South Africa, 1993:8).

According to Theatrecrafts.com (n.d.:1), other parts of the legislation also applies to the theatre industry in the UK, namely:

- Construction Design and Management Regulations
- Control of Noise at Work Regulations
- Control of Substances Hazardous to Health
- Electricity at Work Regulations
- Lifting Operations and Lifting Equipment Regulations
- Provision and Use of Work Equipment Regulations
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations
- Work at Height Regulations

In South Africa, similar parts of the legislation (South Africa, 1993) can be applied to the theatre industry as identified by reading through the Occupational Health and Safety Act and Regulations 85 of 1993, namely:

- Construction Regulations 2014
- Noise-Induced Hearing Loss Regulations
- Hazardous Chemical Substance Regulations
- Electrical Machinery Regulations 2011
- Working at Height Regulations
- Compensation for Occupational Injuries and Diseases Act, no 130 of 1993.

3.3 GENERAL SAFETY PRINCIPLES

Hattingh and Acutt (2009:14) state that legislation compels all companies and institutions in South Africa to have an established health and safety policy. Still, employees must be motivated to accept responsibility for their safety. Furthermore, there are essential principles that companies and institutions need to adhere to regarding occupational safety. These principles need to be implemented as far as reasonably practicable for a specific workplace and include the following:

1. The principle of protection and prevention. This means protecting employees from hazards.
2. Adaptive principle. This means to adapt to the work environment to the abilities of the worker as far as it is reasonable and practicable (Hattingh and Acutt, 2009:14).

According to Hattings and Acutt (2009:90), accidents can be described as the result of a series of events that unfold. They described the main factors contributing to accidents as problems with technical equipment, the working environment and most importantly, the worker. The tendency of employees to disregard policies and procedures is responsible for any accident (*ibid*).

Hattings and Acutt (2009:95) further point out that events and circumstances are fixed in a logical order where one is dependent on the other, and ultimately this results in a domino effect where the accident itself is only one of the sequences of the event (*ibid*). This domino effect can be described as:

1. Lack of control.
2. Personal/job factors.
3. Unsafe acts/conditions.
4. Accidents.
5. Injury / damage / interruption.
6. Cost of accidents.

These principles are only valid if the safety hazards are correctly identified.

Gillett and Sheehan (2017:97) note that the health and safety of the people who are employed is the responsibility of the organisation. In the performing arts, the production manager sometimes has to oversee the wellbeing of the production team.

3.4 GENERAL HAZARD IDENTIFICATION.

A safety hazard, as defined in the OSH Act (RSA, 1993), is a source of danger or exposure to danger. Hazards in the workplace can also be defined as unsafe working conditions that can cause injury, illness and death and represent the most common type of hazards identified. According to Bahn (2013:1), workplace hazards include anything that can cause harm, for example, electrical or other cords running across the floor that might be tripped over or slippery water on the floor or loose carpets. It is crucial to implement effective control measures to diminish or reduce the possibilities of a hazard (*ibid*). Effective control measures are essential for any theatre. The hierarchy of control has five tiers:

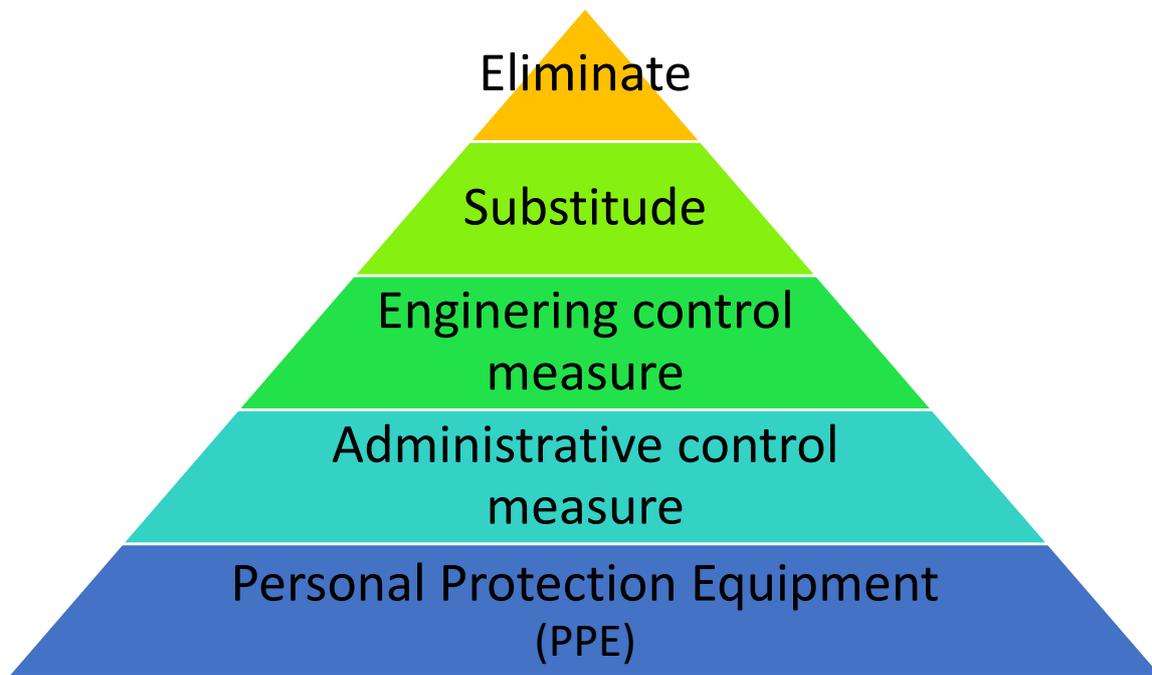


FIGURE 3.1: HIERARCHY OF CONTROL
(Compiled by Hattingh, 2020).

According to the National Occupational Safety Association (NOSA, 2012:186), eliminating the hazard implies that design or action must be implemented to eliminate the hazard by removing it completely. Substituting the hazard means that a design or action must be implemented to reduce or control the hazard (*ibid*). Engineering control measures implies that a hazard is controlled by installing a device or barrier that does not rely on human interaction and engineer out the hazards without it having been eliminated or substituted (*ibid*). Administrative control measures imply that procedures, training, monitoring, or pre-work risk assessments are installed (NOSA, 2012:187). According to Gillett and Sheehan (2017:100), there is no single way to do safety training; it is all based on the environment and the potential hazard of a particular situation. Personal Protection Equipment (PPE), such as hard hats, gloves and goggles, is only used as a last resort and consists of all the equipment and clothing intended to protect the person from exposure to a hazard (*ibid*).

According to Maccoy (2004:214), it is not necessary to analyse every activity for hazards; only those activities with an obvious danger or unusual circumstances. Individuals should consider their safety as well as the safety of everyone around them.

In the paragraphs above, general Safety Hazard identification and preventative measures in the broader industry were explained. For this study on Theatre Safety, it is important to take note of Tarrant's (2016:2) identification of four specific general types of hazards that apply to the theatre.

(1) Physical hazards like:

- Lifting and handling loads.
- Repetitive motions.
- Working at heights.
- Fire.
- Electricity.

(2) Chemical hazards

- Liquids spillages (paints, solvents, cleaner, bleach).
- Dust.
- Fumes.

(3) Biological hazards

- Viruses, fungi, bacteria, moulds.
- Blood.

(4) Psychological hazards

- Working conditions.
- Stress.
- Fatigue.
- Workplace violence.
- Working alone.
- Body posture.

NOSA (2015:92) identifies another general hazard as (5) Mechanical hazards in theatre as well. This category could include:

- The use of manual and power tools.
- Use of faulty machinery and equipment.
- Lack of knowledge or skill.
- Working without authority.
- Wearing improper work attire.

Rossol in Nel (2001b:19) states that it is hard to imagine an industry with more hazards than the theatre. Some common hazards of the theatre include actors ignoring the danger of dropping into an open orchestra pit; how to avoid and cope with fire on stage or in the theatre; smoking on stage or in the wings; the dangers of explosions on stage; and the scene changes taking place. Tarrant (2016:1) comments that with all the activities taking place in the theatre; such as moving sets, the potential for injuries is very high. She adds that productions or theatres must take specific steps to mitigate the potential hazards, such as training theatre crew and actors on health and safety policies (*ibid*).

In the next section, the unique situation of theatre and its safety challenges are discussed.

3.5 THE THEATRE

A theatre can be defined as a building, room or an outdoor structure for the presentation of plays, motion pictures or other dramatic performances (Morris, 1973:1333). A performance can take place in a space that can vary in size, from a building that can seat a hundred people to a stadium that can seat thousands of people (Brocket and Ball, 2011:6). Furthermore, the seating arrangements can also vary, from the audience sitting in raked seats facing the stage to the audience surrounding the stage (Brocket and Ball 2011:7). Barba (2002:13) describes the theatre as an industry governed by constraints such as time, money, space and collaborators. Brocket and Ball (2011:5) add to Barba's description by explaining that certain elements are needed for theatre, namely: a performance space, performers, masks, makeup, costumes, music, dance and an audience.

Bellman (1974:3) observes that all art exists because of a need for self-expression. The artist chooses the form in which the art is presented as the form that suits the artist best in conveying the message. Strong (2010:69) states that although we live in a technological era, people are essential in the theatre. Strong (*ibid*) further explains that theatres are fundamentally factories that manufacture performances; they are factories with a particular atmosphere of creativity, collaboration and joy. Maccoy (2004:219) remarks that a theatre production can move from one location to another; thus, it is important to continually monitor the process, identify the hazards and assess the risks. As mentioned in the previous section, details on specific safety hazards will be discussed in the sections below.

3.5.1 Theatre buildings and Safety

Irrespective of the size of a theatre or the type of stage, general safety measures in the building are required, and safety requirements and procedures must be followed to prevent dangers to the building and to ensure the safety of the audience, crew, staff and artists.

Prescribed safety measures such as the following must be installed in theatre buildings. Exit lights above doors and floor lights must be lit during a performance. Emergency lights must switch on automatically in case of a power cut. All doors from the auditorium to the foyer and from the foyer to the outside of the theatre must open to the outside to accommodate safe exit for the audience in emergencies. The same rule applies for doors

from onstage to the outside of the theatre at the actors' exit at the back of the theatre. No doors are allowed to be locked during a performance. An escape route plan must be visibly posted in all sections of the theatre for staff, crew, actors and audience. Fire and smoke alarms, as well as water sprinkler systems, must be installed and regularly tested in case of fire or smoke. All firefighting equipment must be marked, and access to this equipment must be ensured at all times.

In emergency cases when a theatre needs to be evacuated, the Stage Manager (SM) is responsible for raising the alarm to actors, the crew in the lighting box and Front of House (FOH) with the calm sentence, "Mister Sand is in the theatre." This will prevent the audience from panicking. The SM will phone the fire brigade as soon as possible from the backstage phone; however, in bigger theatres, the alarm in the theatre is linked to the fire brigade. The SM must activate the fire curtain to come down and close the proscenium opening; open the smoke roof; activate the sprinkler system if necessary, and coordinate the evacuation of the backstage crew and actors. This is just an example of how one theatre operates, as every theatre will have a different protocol.

Trained FOH staff is responsible for the orderly evacuation of the audience in an emergency to a marked safe space outside the theatre at the green marker: Assembly Point.

3.6 DIFFERENT TYPES OF STAGES

According to Brockett and Ball (2011:285), there are three characteristics of any theatrical space that influence the audience's response and how the production elements are used:

1. Degree of formality.
2. Size.
3. Arrangement of the actor-audience relationship.

Thrust stage – According to Brockett and Ball (2011:288), a thrust stage is a theatre where the audience is seated on three sides of the stage, creating a more intimate performer-audience relationship.

Arena theatre – The arena stage, also known as a theatre-in-the-round, can be thought of as being like a boxing ring or rugby stadium.

Multiform theatre – The multiform theatre, also called a flexible space or black box theatre, is an elementary, big, black room with flexible seating and staging arrangements.

Proscenium theatre – The proscenium stage, also called a picture frame stage, is the most popular stage for most theatre artists (Gillette, 2008:51). In this study, the focus will be on the proscenium stage as it is the most popular and commonly used theatre stage.

3.7 THE PROSCENIUM STAGE

According to Gillette (2008:51), the proscenium stage is a descendant of the proscenium and *skene* of the Greek theatre and has been the dominant theatre style for more than 300 years. Carver (2013:17) explains that this type of theatre has an archway that separates the stage from the audience; the stage being on one end and the audience being on the other end (the audience faces the stage directly). According to Selden and Rezzuto (1972:24), older theatres have an arch that is very ornate and establishes a definite separation of stage and audience. In contrast, newer theatres have a minimal and simple arch. Brockett and Ball (2011:287) add that with the proscenium stage, set and light designing and actor movements are easier and more natural.

This type of theatre has many safety measures built into the design, such as a fire curtain and sprinklers that are extra safety measures to protect the audience, the production team and actors. There are safety lights and marked exits in the auditorium and blue light in the backstage area, which makes an evacuation procedure run smoothly and prevent panic. There is a discussion on the mechanisms of the fire curtain and evacuation procedures later in the chapter (cf. Section 3.8.9).

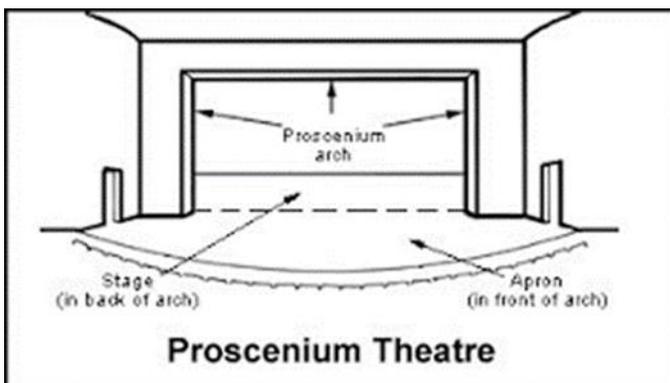


FIGURE 3.2: THE PARTS OF A PROSCENIUM STAGE (Gillette, 2008:53).

Proscenium theatres come in a variety of shapes and sizes and directors make an informed choice of theatre, depending on the genre and scope of the production.

The bigger the theatre, the bigger the safety hazards due to the increase of audience members and the size of the cast and crew. More trained personnel must be present, and

the emergency procedures must be revised regularly and rehearsed to ensure that everyone working at the theatre knows what to do in the case of an emergency.

3.8 THE BACKSTAGE AREA: BEHIND THE PROSCENIUM

3.8.1 Stage floor

Gillette (2008:53) states that the stage floor is a working surface that has several different functions and must have certain qualities to improve safety on stage. It must provide a secure, resilient, non-skid surface that facilitates the actor's movements. Nel (2001b:165) points out that the stage floor is the most important working area for both technicians and artists. Nel (2001b:23) mentions in his appendix that, the stage floor should be splinter-free, smooth and not be assembled with wide joints. Nel (*ibid*) further add that the stage floor should be kept clean and free of any unnecessary materials or tools.

3.8.2 Wagons

According to Gillette (2008:57), wagons, also known as a slip stage, is a stage wagon that covers the entire width of the proscenium arch and is usually stored in one of the wings. Whole sets can be mounted on the wagon and rolled into place on stage. The wagon, as with the revolving stage, are permanent features of most theatres (Gillette, 2008:57). For example, the two wagons at the Wynand Mouton Theatre, UFS, are operated manually with four people pushing from behind and one person operating the release at the front of the wagon. To ensure that no accidents occur when working with the wagon, the stage must be cleared, and only essential personal working with the wagon may be on stage. The wagon must be pushed slowly to avoid it crashing into the tyres set up at the wall, to prevent damages to the wagon or bouncing back injuring the stagehands pushing the wagon.

3.8.3 Traps

Holloway (2010:12) explains that many theatres have trap doors built into the stage, which serves as a disappearing agent for actors or props. He further adds that if a theatre does not have a trap door, but a production requires one, decking will need to be installed to raise the floor level to invent the required space. Strong (2010:111) adds to Holloway's statement that the simplest type of trap door is the hinged or sliding trap door that may be opened to allow an actor to make an entrance from below or to exit. Nel (2001b:39) proposes in his appendix that extra rehearsal for artists and technicians are needed when traps are used.

Gillette (2008:57) cautions that Murphy's Law indicates that if a theatre has trap doors, they will always be in the wrong place. Nel (1992a:17) warns that if traps are left open and unattended, someone can fall into it. Some theatres have trap doors with hydraulic lifts that can lift an actor or object from below the stage to floor level. If the traps lift moves at the incorrect time with someone on it, that person can get seriously hurt. According to Wheatley (2009:162), all traps should be barricaded and marked to ensure that someone does not fall down the trap.

When trap doors are used for a play, extra rehearsal time must be provided to ensure that everyone part of the production is aware of the trap and that the actors especially know where the trap is located and how to move around it when there is little light on stage. A general rule is that trapdoors should be kept closed at all times during day or night, except when the need is there in the production on the stage itself. In South Africa, the sad incident of Gaynor Young is commonly known. The talented 28-year-old actress fell 18 metres down an open stage lift shaft at the State Theatre in Pretoria in 1989. She broke both legs, both arms, her ribs and every bone in her face¹. Fortunately, she survived. (See section 3.8.9 for a full description of the accident)

3.8.4 Revolve

The revolve, also known as a turntable or revolving stage, offers an easy way of shifting scenery but also contributes to a visually exciting performance (Gillette, 2008: 57). Strong (2010:113) remarks that a revolving stage can be used for multiple sets that can be rolled into view as needed. Nel (1992a:17) further comments that a revolving stage can be built into the side stage or the backstage wagon and then brought forth when the production calls for a revolving stage. Nel (*ibid*) also adds that a person can stumble when getting on or off the revolving stage, and sometimes décor on the revolving stage can fall over if it is not fastened correctly. In his appendix, Nel (2001b:44) states that only the SM or the technician in charge may give instructions to rotate the revolve and that all scenic units must be fixed on the revolve to prevent the unit from falling over when moved. Nel (*ibid*) further cautions that persons are not allowed to step off the revolve if it is moving and ensuring that the scenic units do not protrude over the edge of the revolve.

¹ The Grimlin, 2015: <https://www.thegremlin.co.za/2015/11/18/gaynor-young-returns-to-the-state-theatre-26-years-after-near-fatal-stage-accident/>

3.8.5 Stage drapes

According to Strong (2010:98), stage drapes play a significant role in any stage setting, from the extravagant red main curtain that hides the scenery to the more serious black box within. Gillette (2008:56) adds that there are different kinds of drapes found in the theatre, such as a grand drape, grand valance, false proscenium, legs and borders, and backdrops. However, they are all designed to mask the backstage area from the audience. Stage drapes are traditionally black and made from light-absorbing material such as heavyweight velour. The typical hanging positions of the different stage drapes is depicted in the image below.

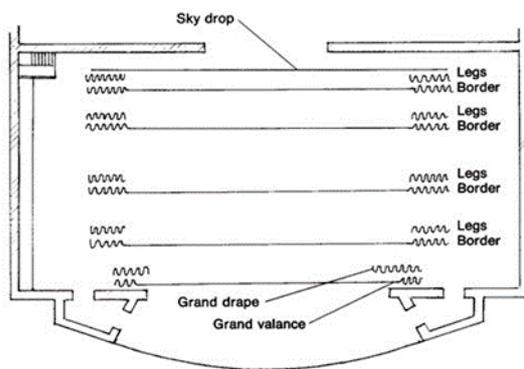


FIGURE 3.3: STANDARD HANGING POSITION FOR STAGE DRAPERIES (Gillette, 2008:65).

According to Wheatley (2009:160), all stage drapes should receive a fire-retardant treatment or be inherently fireproof and that records should show the manufacturing date as well as the date the drapes were last treated. The terms fire retardant and fireproof should not be mistakenly regarded as having the same meaning. According to Specialty Theatre (n.d.:2), flame retardant fabrics will still burn; they are just more resistant to heat and offer more protection than fabrics that have not been treated. Fireproof curtains, on the other hand, will not burn at all. Dangers such as smoking on stage, explosions used on stage, the use of candles or close hanging lights are all potential hazards that can cause the drapes to catch fire. It is the technician's job to ensure that the lights are not too close to the drapes to prevent potential fires. It is also the directors, SM and actors' job to ensure that their actions concerning smoking, the use of candles and the use of explosions are rehearsed to ensure that everyone knows what to do to ensure that these hazards do not come too close to the drapes. Few people know that the upward heat surge of a typical 'stage bomb' that is bought at theatre stores and used for explosions on stage reaches three meters above the bomb. Care should be taken to ensure that the bomb is not exploded under overhanging borders.

3.8.6 The wings and backstage areas

According to Strong (2010:99), the setting up and changing of scenery must be as straightforward and flexible as possible. The movement of full sets or pieces of sets on stage or off stage can take place horizontally into the wings or to the rear backstage, but the most comfortable place to move scenery would be into the wings. When a set is moved into the wings, it will most likely be moved on a wagon. The wing area must be cleared of any obstructions, and only the necessary stagehands, SM or technical director may be on stage for the scene change to take place. In this way, potential injuries are restricted, and the actors and the rest of the technical crew are safe from harm. The wings need to have space for a props table and quick changes for actors or dancers, but these areas must be further away in the wing to allow actors to move into the wing without bumping into the props table. In some productions, the wing must have a clear space for performers to make a quick exit or even run offstage without colliding into a piece of scenery (*ibid*).

Holloway (2010:10) explain that some theatres have little wing space and others have a lot of wing space. The theatre space and backstage space will determine what type of production can be staged at the specific theatre. A production with two sets cannot be done in a theatre with little wing space, since there will be no space for the sets or the actors to move freely. Preventative safety measures, like not smoking backstage and blue lights installed behind scenery for actors to see their way in the dark areas, must be followed to prevent any injuries backstage. Yellow-painted lines on the floors that lead to yellow-painted stage doors that serve as a guideline for emergency escapes in darkness if needed in an emergency must be in place backstage. White-glow paint on edges of rostra, steps and ladders backstage behind scenery or on the back of set must also be implemented to ensure that actors or technical staff do not walk into the set, or fall off a rostrum.

3.8.7 Apron

The apron, also called the forestage, is an extension of the stage from the proscenium arch towards the audience (Gillette, 2008:54). Since the stage area is higher than the auditorium, Nel (1992a:18) cautions that artists run the risk of falling off the front stage because of the darkness of the auditorium as well as the front of house lights that shine in the actor's eyes, making it difficult for them to see the edge. Marking the edge with white or glow tape can assist the actors in seeing the edge and avoid falling off the stage.

3.8.8 Orchestra pit

Gillette (2008:54) states that the orchestra pit, which holds the band or orchestra during a live music performance, is almost always situated between the apron of the stage and the audience. Carver (2013:18) explains that the word “pit” stems from the fact that this area is lower than the auditorium floor, creating a “pit” similar to the standing room area in Shakespeare’s time. Nel (2001b:28, 37) adds that a flameproof theatrical gauze or scrim can be stretched over the orchestra pit to protect the musicians from small falling objects and that a warning barrier must be placed near the front of the stage to prevent people from falling into the pit.

Gillette (2008:55) further adds that in some theatres, the orchestra pit can be hidden under removable floorboards under the apron; the floorboards are removed when the pit is needed for a production. For example, in the Wynand Mouton Theatre at the University of the Free State in Bloemfontein, the back section of the orchestra is partly under the apron and to the front of the seats in the auditorium floor. If the orchestra pit is open, the danger exists that actors might fall into the pit. A safety precaution is that light must always be on in the orchestra pit so that the actors know it is open.

In the appendix, Nel (2001b:9) adds that all doors leading to the apron must be closed and locked when not in use. This rule is there to prevent those actors or theatre personnel entering a dark theatre from running the risk of falling off the stage and injuring themselves before a rehearsal or performance. As with the apron, Nel (1992a:18) states that an artist runs the risk of falling into the orchestra pit if the preventative measures mentioned above are not taken. The general rule is that actors and crew stay backstage, and the audience in the auditorium. (Some productions might require a combination of audience and cast). The orchestra pit must always have a ghost light on for actors to see the open pit, and a railing must be installed in front of the audience to prevent an audience member from falling into the pit. In some theatres, the pit is situated beneath the auditorium floor. The pit is then covered with floor panels, and when there is no need for an orchestra in the production, auditorium chairs are placed on top of the pit. There are some theatres, like the State Theatre in South Africa, where the entire orchestra pit can be raised to stage level, using hydraulic lifts, as to enlarge the forestage/apron area. These lifts can raise or lower whole sections of the stage to accommodate the specific production. For example, the Sand du Plessis Theatre in Bloemfontein has several lifts on stage, and the orchestra pit with the full orchestra can be lifted to floor level from beneath the stage and lowered again. Nel (*ibid*) furthermore states that there is a danger of electrical shock for the musicians, because of

the electrical power outlet situated for their instruments in the orchestra pit. All plugs and cables must, therefore, be grounded appropriately and taped down to ensure a safe working environment for the musicians.

3.8.9 Safety curtain/ firewall

According to Strong (2010:102), theatres typically have a safety curtain, which can close the proscenium opening when released. It is important to note that the proscenium arch separates the stage from the auditorium, which can be blocked by the fire curtain (the firewall) in case of an emergency. The fire curtain can isolate and protect the backstage crew and the audience in the auditorium separately, if needed, for evacuation purposes. The fire curtain can prevent a fire from spreading from one area to the other. Historically, the safety curtain's purpose has been to protect the audience from a stage fire. Still, today it is also useful in keeping the auditorium and backstage areas clean and warm before curtain up or during décor-building stages.

There are various safety curtain types, but the most common design is a flat, rigid, counterweighted, one-piece unit made of steel. Baker (1968:95) explains that the safety curtain is suspended by steel wires and can be operated either by the counterweight system or electronically. A steel firewall like that in the Wynand Mouton Theatre (UFS) weighs over five tons and the firewall installed in the State Theatre in Pretoria 30 tons. Electrical and hydraulic systems operate these heavy firewalls. Under normal operating conditions, brakes hold the fire curtain in place. The fire curtain is controlled by the stage manager (SM) at the prompt-side corner of the stage. In case of an emergency, the power might in certain instances automatically cut out, and thus it is the SM's task to lower the fire curtain manually. Behind the SM desk is a Red Box containing the ropes the SM use to manually lower the firewall, open the smoke release door at the top of the stage in the roof, and activate the water sprinkler system if necessary. The previously mentioned smoke vent and the sprinkler system will be discussed in section 3.15. With the axe provided, as depicted in the image below, the SM brakes the Perspex in front of the box to get access to the ropes. The fire curtain can be lowered manually by releasing the blue brake lever on the rope. The same procedure is valid for opening the smoke release door in the stage roof, and the activation of the water sprinkler system.



FIGURE 3.4: IMAGE OF THE ROPE BOX AND AXE IN THE WYNAND MOUTON THEATRE (UFS).

In the image above, the first rope is connected to the smoke vent; the second rope is connected to the fire curtain, and the third rope is connected to the sprinkler system. Baker (1968:95) also add that it is the SM's job to make sure that no furniture is placed under the fire curtain and that nothing interferes with its descent. Nel (2001b:22) explains that the effective working of the fire curtain should be tested before a performance and lowered after every performance when the theatre closes.

3.9 STAGE LIGHTING

The visibility of the visual elements of a production is made possible by the artistic choices of light and darkness, created by the lighting design of the production, which together assists in creating mood and helps audiences understand and enjoy the production (Gillette, 2008:338). Bellman (1974:7) explains that the lighting of the production depends on the prescriptions of the playwright, but mostly on the vision of the director and lighting designer. According to Gloman and Napoli (2007:321), lights are not only there to lit the action on stage, but also to establish the time of day and whether the action happens indoors or outdoors. Brockett and Ball (2011:405) comment that stage lighting often escapes notice, because it is not tangible, does not take up space and is only visible when striking a reflective surface. Lighting, in general, is often overlooked by the audience unless it is done wrong.

Reid (2001a:59) notes that time is the biggest problem when it comes to rigging and focussing the lighting. No matter how well the lighting was planned on paper, it takes a long time to rig the lights, focus the lights and put colour gels together. The setting of brightness levels for individual lights, the grouping of lights for specific scenes and the plotting of cues in the lighting control computer also takes up much time.

The lighting bar or lighting grid is suspended above the stage. In some theatres, the lighting bar or grid can be lowered to access the lights, but to adjust the lights for a specific play, the lights need to be adjusted from above and from the front of house bar of lights to focus the lights at specific points on stage (Gillette, 2008:345). This results in the lighting technician either using a theatre scaffolding ladder or an A-frame ladder to access the lights. Working at height training and certification are pre-requisites for working at heights more than two meters (The Institute for Working at Heights, 2017:online). State-of-the-art theatres use expensive scissor lifts to raise technical staff to focus lights easily (figure 3.5). Nel (2001b:32) states in his appendices that lighting bars are designed and constructed to carry a specific load and that the weight limit must never be exceeded. He adds that apart from the clamps and hooks, lighting units must be secured to the bar through a safety chain or cable (*ibid*).



Figure 3.5: A SCISSOR LIFT. ²

3.9.1 Lighting equipment

There is a wide variety of lights that are used in the theatre; for instance, a fresnel, parcan, floodlight, profile and strip light. Some of these lights can be fitted with barn doors, which help to control the beam of the lights (Carver, 2013:294). A gobo is another instrument that can be fitted to the lights, yet it projects a pattern (Holloway, 2010:121). Both the barn doors and gobo include the risk of falling off the lights when rigging is in process and can

² Image from: <https://www.jlg.com/en-za/equipment/scissor-lifts/electric/es-series-scissor-lifts/3246es-electric-scissor-lift>

potentially injure actors or technical crew in the parameter. Gels are coloured gelatinous materials put in front of a light to cast a particular colour (Gloman and Napoli, 2007:346). Gels can get too close to the warm lights, which can either cause the gels to catch fire or melt which can be hazardous for the actors or audience members, depending on where the lights are positioned. Gobos are fixed to the lamp with light cables, and gels slide tightly into grooves (Gloman and Napoli, 2007:346).

In terms of the bulbs used, previously the old filament bulbs were warmer than the new types of bulbs, and these old bulbs ran the risk of setting the curtains on fire because of the immense heat these bulbs created. New energy-saving, cooler lights are used, which reduces the risk of the curtains catching fire. Niaymelani³(2016: online) warns that when changing a light bulb, the lighting instrument should be plugged out, and gloves must be worn to protect against any sharp edges or heat. In the past, the biggest problem when it came to lights was plugging too many lights into one channel. This caused electric wiring to overheat and catch fire. Today, only trained professionals are allowed to do the wiring of the stage and set the lights.

3.9.2 Control systems

Holloway (2010:91) notes that modern lighting is governed by sophisticated computer systems that make programming challenging lighting cues easy. Reid (2001a:65) adds that the central control system for stage lighting is referred to as the *board* (switchboard or dimmer board). The lighting control system has two parts: the dimmers and the desk.

Dimmers – Baker (1968:188) explains a resistance dimmer as a device consisting of a coil of wire wound around an insulating material. The number of dimmers used depends on the number of circuits being used. Today, most resistance dimmers are replaced by digital dimmer devices that do not get as hot as the old resistance dimmers and are more cost-effective. Reid (2001a:66) states that the dimmer room is the distribution point for electricity to all the sockets around the theatre to power the lights. According to Morgan (1995:54), the dimmers link the desk with the lights, allowing the intensity level of the light to change. Niaymelanin (2016: online) adds that only an authorised person may enter the dimmer room.

The desk – Morgan (1995:51) states that either a desk can be manually or computer-operated, but some desks have the option of both. According to Reid (2001a:66), it is

Niaymelanin - <https://www.youtube.com/watch?v=aZhES5cm1gs&t=5s>

standard practice for the desk to be situated in the back of the auditorium with a clear view of the stage. Carver (2013:292) adds that because the desks are currently computer-based, there are endless possibilities for lighting designers. Reid (2001b:38) comments that the desk has a pre-setting feature that is controlled with a master fader, making it easier to control the lights. Again, only a qualified person may operate the desk, as it is very sensitive equipment and electrical or electronic problems may occur.

3.9.3 Lighting design and rigging

To make the most from lighting, planning is necessary (Reid, 2001a:60). Before planning the lighting design, the lighting designer must read the script to get a better understanding of the play. It is also critical that the lighting designer and the director share the same visual interpretation of the play. According to Gillette (2008:365), a few things are needed before a person can start with the lighting design, namely:

- The ground plans of the scenic design.
- The scale ground plans of the stage and auditorium.
- A layout with specifications for the theatre lighting system.
- An accurate inventory of all the lighting equipment in the theatre or theatres if the production tours.

Lighting plot – According to Carver (2013:295), the lighting plan shows the exact location of the lighting fixtures along with all the accessories, and it must be done to scale with the correct symbols. Reid (2001a:67) remarks that the completed plan must show the type of light, their positions, their colours and their control-channel numbers. Gillette (2008:349) also adds that there is no universally accepted style of drafting a lighting plot, as long as it contains all the necessary information, and the drawing is according to scale. Then any member of the lighting crew can read the plan. An example of a lighting plan can be seen in figure 3.6:

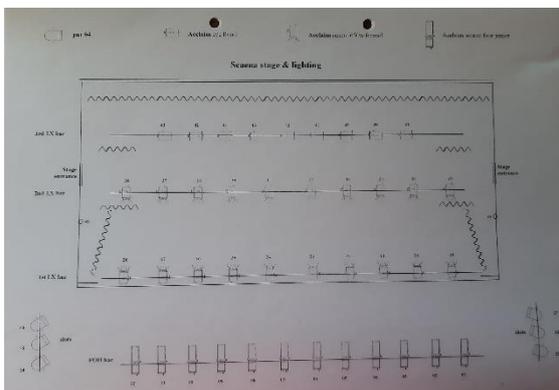


FIGURE 3.6: SCAENA THEATRE LIGHTING PLAN (UFS).

Rigging - Rigging the lights are done after the lighting design is done. According to Lee and Grote (1982:238), hanging lights is a relatively simple process that requires concentration. Reid (2001b:102) adds that there are a few steps you need to follow to rig lights successfully:

1. Hang all lights loosely on the bar by their hook clamps and slide them along the bar until in the correct position;
2. tighten the hook clamps and fix all the safety chains;
3. plug in each light ensuring enough slack in the cable to focus freely;
4. fit any gobo's, barn doors and colour gels, and ensure that they are secured to avoid that they fall off the light injuring the actors or technical crew;
5. focus each light; and
6. lastly, flash out all the lights to ensure that they are working correctly.

Wheatley (2009:166) states that only authorised and trained personnel are permitted to work with the rigging. Niaymelanin (2016: online) adds that all the tools should be secured to the technician's belt when rigging any lights or scenery. The stage should be cleared, and there must be silence when someone is rigging (*ibid*). Rossol (1991:14) suggests that any rigging should be done when no other activities are scheduled to minimise the potential dangers that can result in injuries. A critical rule is that no-one may rig lights alone. At least two technicians need to be present during rigging sessions, as something might go wrong with the rigger on the ladder, like getting an electric shock due to neglected wiring. The other technician can cut the power or assist the rigger in any other dangerous situations (Niaymelanin, 2016: online).

3.9.4 Lighting safety

Each spotlight should be mounted on the bar and secured with a safety cable for added protection against falling or if something happens while adjusting the lights (Gloman and Napoli, 2007:337-338). Objects falling from heights represent a significant safety hazard that caused a total number of 157490 incidents in 2015 in the USA (The Institute for Working at Heights, 2017: online). Reid (2001b:104) notes that because of the time limit, cutting corners is a risk. Technical personnel who are tired, mentally and physically, might overlook a potential hazard; thus, checking all the time becomes necessary. Wheatley (2009:167) states that only authorised and trained personnel are eligible to work with the lights, but must still be careful not to touch the glass globe with bare hands, because body oils may cause hot spots to develop which may subsequently cause the lamp to explode in your hand.

Accidents because of lighting malfunctions have happened since the early days of the theatre industry. An example is the burning down of the Globe Theatre in London on 29 June 1613, which led to the loss of life (Havel, 2016:online). Another example is the disaster that happened on 30 December 1903 when Chicago's Iroquois Theatre burned down only a mere five weeks after it had opened (*ibid*). An arc light ignited a painted muslin curtain, and flames rapidly spread to the top of the stage. On opening the backstage freight doors, an inrush of air caused a giant fireball that engulfed the audience— a combination of factors that could have been prevented caused more disaster. There was only one staircase from the upper galleries of the theatre, and many exits were blocked, locked or unmarked. Some apparent exits were dead ends. Exit doors opened inward, and outdoor fire escapes were unfinished. The building had no sprinkler system installed. There were over 602 fatalities (around a quarter of the people in the building). The real number will never be known, as some bodies were removed before the official count. Those who were not burned were asphyxiated or crushed in their panic to escape (*ibid*).

An accident because of insufficient lighting is the accident of Gaynor Young that took place in Pretoria on 9 December 1989. Young fell from a stage lift (18 meters) during a performance of Camelot in the State Theatre, Pretoria in South Africa (Young, 2013:1-2). She was the understudy for the role of Guinevere, and when Kate Normington fell ill, Young stepped up to the role. She performed in the production without doing a technical run beforehand and just before the end of the first Act, and she fell down the lift shaft. Three things contributed to the accident. The fact that the staff did not perform a technical run beforehand, that she did not know the position of the open shaft and that the shaft was unsecured, contributed to the accident (Young, 2013:1-2). No one is quite sure what happened exactly. Maybe she miss-stepped or turned in the wrong direction. All that is known is that the stage was dark at that moment, and she could not see where she was going. Luckily, she survived, but with severely debilitating injuries.

3.9.4.1 *Who is responsible?*

In terms of the lights, the chief electrician, in the UK, is responsible if something were to go wrong. They must be an engineer with a vast knowledge of the installation and maintenance of different machinery and lights. In the lighting box, he is in charge and has to sort out the problems regarding the lighting. He receives the necessary instructions for the production's lighting design from the SM during the technical rehearsals (Baker, 1968:85). In South Africa, the lighting technician must ensure that everything regarding the lights run smoothly.

3.10 THE SET

The set helps the audience to understand where the action is taking place and visually enjoy the production. Gillette (2008:161) states that before 1875, no attention was given to specifying elements such as period, locale, status and mood. In contrast, modern designers pay great attention to all the detail for a well-convinced stage setting. Brockett and Ball (2011:363-365) point out that a set serves a few purposes, in that it:

- defines the performance space;
- creates a floor plan;
- characterises of the acting area while emphasising the production style, focus and themes; and
- creates mood and atmosphere.

Welker (1977:7) states that some modern productions require minimal and symbolic scenery instead of a full set. According to Nel (2001b:14) in his appendix, dangerous scenic action and rehearsals must be rehearsed thoroughly under the supervision of the Head of the Technical department, and that only qualified personnel can operate the scenic units during a scene change. No smoking or open flames may come near the set, as it can set fire to the entire set and theatre. The SM should also control the actors and the crew to avoid any horseplay backstage or on the stage.

3.10.1 Set design

Before set designing can commence, the set designer must first read the script to understand better what is needed when designing. As with the lighting design, the set designer and the director must discuss and agree on the visual image to be conveyed by the production. Brockett and Ball (2008:363) explain that the set designer is the person who characterises the space, arrange the set to accommodate actors and enhances the concept of the play. Moreover, Selden and Rezzuto (1972:65) state that the planning of the scenery must be done as early in the production period as possible. Welker (1977:14) explains that the theatre hosts actors, not ordinary people, and that set designs are a reorganisation and interpretation of everyday life, not just a copy.

To communicate the concept for the set, the set designer must provide several graphic representations to the director (Selden and Rezzuto, 1972:66). According to Brockett and Ball (2011:365), how the set designer chooses to characterise the play will affect how the audience perceives the production. Gillette (2008:161) adds that the golden rule when it

comes to set design is that the design should create an environment for the play that is supportive of the production concept.

A few elements need to be kept in mind when designing the set; for instance, the historical period, the location and the socioeconomic level and personality of the characters/actors in the play. Gillette (2008:368) states that a set design must be practical and to achieve this, the set designer must pay attention to the needs of the director and actors and the demands of construction. In his appendix, Nel (2001b:10) comments that calculations must be done to ensure that the materials that are used for scenic construction are durable enough to carry the expected load. Every production will have its technical demands when it is constructed, and the complexity of the design is directly related to the intricacy of the design (Gillette, 2008:168-169).

3.10.2 Set construction

Constructing scenery for the stage, according to Selden and Rezzuto (1972:102), must fulfil some practical requirements, namely, that the scenery must be:

1. designed for quick and easy construction;
2. designed for economical construction and should avoid waste;
3. light for effective scene changes with a minimum number of stagehands;
4. strong and durable;
5. well assembled for quick scene changes; and
6. designed for easy storage.

Welker (1977:38) adds that set building is not like an ordinary building, where regular carpenters build a staircase that should last for decades; stage scenery only needs to last a few weeks. Traditional carpenters that work in construction will build structures with a heavy material that may be convenient. Still, for the stage, the structures should be light, easy to construct and look identical to the real-world object. Initially, scenic construction happens in the scene shop, but Brockett and Ball (2011:374) add that in some instances, the set can be assembled on stage or in the scene shop next to the stage. The majority of productions comprised of a few set pieces; however, traditional sets still exist today (Brockett and Ball, 2011:370). According to Armstrong⁴ (ACMA Theatre Company, 2016: online), the shop where the set is built is the most dangerous part of the theatre, since there can be a lot of safety hazards such as nails, debris and sharp tools lying around the area. Sawdust, from working with wood, smoke from welding apparatus, and chemical pollution

⁴ Shop Safety - <https://www.youtube.com/watch?v=54DaZiF4658>

from paint are some of the dangers that might hold risks for the health of workers. Applicable PPE should be used where necessary. Many workshops are fitted with air conditioning pipes at all machine workstations to extract polluted air and dust.

Gillette (208:239) states that it takes many hours to construct a set and that efficient set construction can be accomplished by following four rules:

1. Build the practical elements first so that the actors can use it during rehearsals.
2. Build anything that will have a time-consuming and complicated paint job last.
3. Construct a schedule for the remaining scenic elements that need to be built.
4. Allow time at the end of construction for adjustments, repairs or changes that need to happen.

Nel (2001b:16) notes in his appendix that only qualified personnel may operate tools and equipment and that it must be handled in such a manner to avoid any threat to the health and safety of other persons present. The equipment must also be regularly inspected and replaced if necessary, to prevent any possible injuries when faulty equipment is used (*ibid*).

Two basic scenic forms exist in the theatre that all sets are classified as; namely vertical and horizontal (Gloman and Napoli, 2007:3). The vertical scenic form is more commonly known as flats, and the horizontal scenic form is more commonly known as platforms.

Flats – Flats refer to a wooden frame covered in fabric, and they are used to replicate a wall (Gillette, 2008:247). According to Gloman and Napoli (2007:4), flats are lighter than platforms and can be stored quite easily. Two types of flats exist; namely, soft-cover flats and hardcover flats. Flats can fall over quickly and have the potential to injure someone when the flat falls on them (Gloman and Napoli, 2007:4). Soft-covered flats imitate sails when there is a wind and is more susceptible to falling over if not weighted down, while hardcover flats are heavier and can be difficult to move.

Platforms – According to Carver (2013:195), platforms form a section of flooring that adds height to the current stage. Gillette (2008:258) add that directors love to use platforms because they create multiple levels, which in turn, create an interesting picture blocking-wise (actors movements). When using platforms, the edges must be marked with tape to indicate the boundaries to the actors to avoid anyone accidentally falls off the platform.

According to Gillette (2008:281), painting the scenery is the crowning touch, and it provides visual interest and depth to the set. Selden and Rezzuto (1972:165) point out that scene

painting needs to be exaggerated since it needs to be visual from a distance. Moreover, Brockett and Ball (2011:376) state that a variety of methods exist and any combination thereof can be used. The set painting must take place in a well-ventilated room, because of the fumes of the paint. No open flames must come near the wet paint, as it is highly flammable and can create an explosion (Brockett and Ball, 2011:376).

3.10.3 Set up and strike

The scenic units are usually moved to the stage, assembled and fastened in place before the technical rehearsal. During the technical rehearsal, little attention is paid to the actors; instead, the focus will be on the costumes, makeup, sound, lighting, properties and scenery (Welker, 1977:301). Nel (2001b:10) states in his appendix that all scenic structures must be set up, changed or dismantled under the supervision of the responsible person - such as the technical director.

Set up – According to Welker (1977:309), the set assembly must be done in a specific order that is outlined by the set design to avoid any possible confusion or incorrect assembly. The scenic units must be fastened to ensure minimal damage during rehearsals and the performance to the actors as well as the set. Flats will be assembled first, and then the rest of the set will be put in place. Masking flats are usually added when the rest of the set has been assembled with enough space for actors to move freely. Welker (1977:311) explains that the masking flat has two functions, to hide the backstage area and to suggest what the audience would see through the doors and windows. Nel (2001b:10) comments in his appendix that only after the set has been inspected, can the rehearsals and performances commence. The master carpenter and the technical director focusing on the sturdiness, functionality and overall structure of the set to ensure that the set can withstand anything during the rehearsal and performance stages of the production will do this inspection.

Striking – A strike usually follows the last performance of the play, and some theatres disassemble the entire set directly after the show while all the crew and actors are there to help (Welker, 1977:315). Because a strike can be chaotic, the shop supervisor must give constant supervision, and attention to the unique dangers that can be found during a strike such as flats coming down, loose screws lying around, debris all over the place and an exhausted crew. Many jobs are being done simultaneously, and large quantities of trash are handled (Welker, 1977:316). Even if the garbage is continuously picked up, debris will be lying on the floor, including some boards with nails sticking out. Additionally, heavy units have to move, and workers will walk backwards when handling flats, so the shop supervisor

must give safety instructions to the crew before the strike commences. Welker (1977:317) notes that the basic pattern of a strike is the reverse of a setup. Furniture, decorative elements and props must be removed before the set can be dismantled. Otherwise, the crew might be dealing with broken glass as well as the debris of the set. Wheatley (2009:162) states that the strike is the most dangerous time of a production as everyone is exhilarated and exhausted at the same time when dismantling and storing the set. Rossol (1991:18) warns that a strike is not a time to party and it should not be hurried to get to a party.

3.10.4 Set construction safety

Accidents occur daily in the workplace, and the theatre industry is no different. Some are just minor cuts and bruises on the hands from working with tools or paper, but others can be more serious. Many times, a work-related accident only makes the headlines when it was something serious or a well-known person is involved, but otherwise, it goes unnoticed. In the theatre industry, there is a high possibility of accidents - especially while building the sets, but also during transport of sets and even during performances, as the following international and national incidents will indicate:

Pierre-Andre Salim, a student from Yale University, died while unloading sets from the back of a truck when a stack of particle boards fell and pinned him against the truck's wall (Marsden, 2008:1). Although Salim was wearing a hard hat, the weight was too heavy, and he suffered major head injuries. The Occupational Health and Safety Administration investigated the incident and found that the way the boards were stacked contributed to the accident (Marsden, 2008:1).

During August 2010, opera singer, David Rendal, sued a theatre in Copenhagen after a set fell on him during a performance and shattered his knee and hip as well as injuring his shoulder (Roberts, 2010:1). This accident cost the 61-year old singer most of his job opportunities, and he eventually lost his house (Roberts, 2010:1).

In 2017, during the Free State Arts Festival, Bloemfontein, a set fell onto an actor during his performance because it was not correctly weighted. Luckily, no one was seriously injured, and the show could go on as planned (Schultz, 2017).

Some, on the other hand, are not so lucky. In December 2018, an experienced rigger had a fatal fall during the set-up for the Global Citizen Festival in Johannesburg. The rigger wore

all the appropriate safety gear, but that did not protect him when he fell. An investigation following his death is still ongoing (Gous, 2018:1-2 of 4).

The set and the stage properties are the two things that have the potential to cause the most safety problems for the actors and personnel working in the theatre because there are so many things that can go wrong with it.

Gillette (2008:242) emphasises that a few safety rules, along with common sense, must be applied to ensure a safe working environment for set builders and props makers, namely:

1. Clothing should be suitable for the work, and close-fitting shoes must have rubber soles and must be closed, and no loose hanging jewellery should be worn.
2. Long hair must be tied back so it will not be caught up in machinery.
3. Get the instructions before operating power tools.
4. Concentrate on what you are doing.
5. Keep the workspace clean. Mason, Kaleb and Julio⁵ (2016: online) add that no tools must be left lying around, as it can be a potential tripping hazard.
6. Know where the first aid kit is kept and report any accidents.
7. Make sure the space is well ventilated or wear a dust mask when working with materials that emit a lot of dust.
8. Ensure that all electrical cables are taped down to avoid tripping over them. The Greenwood Theatre⁶ (2018: online) adds that artists must be vigilant as not all the cables are taped down during a performance.

Armstrong (ACMA Theatre Company, 2016), adds that personal protection equipment (PPE) such as gloves, eye protection and so on, should always be worn when working in the shop. Mason *et al.* (2016: online) add that only authorised personnel may use the power tools and need to supervise unauthorised people using the equipment.

NOSA (2012:62-63) adds that good housekeeping (a place for everything, and everything in its place) is vital to ensure that everyone involved is safe. Rossol (2001:53) states that good housekeeping is not only wise but the law. The benefits of good housekeeping, according to NOSA (2012:62-63), include:

- It reduces property damage so that the theatre can use the same pieces for different productions.
- It improves productivity since the tools, materials and set pieces will be easy to find.

⁵ Mason, Kaleb and Julio - <https://www.youtube.com/watch?v=UfOHmd0ADM0&t=76s>

⁶ Greenwood Theatre - <https://www.youtube.com/watch?v=EK963VA9HeM&t=75s>

- There is more control over the equipment.
- It lowers the risk of safety hazards since everything is neatly stacked or packed.

3.10.4.1 *Who is responsible?*

The Master Carpenter, along with the technical staff, is responsible when something goes wrong with the set. The set designer is in charge of designing the set and can assist in building the set along with the technical staff. They must be highly versatile in the use of various tools and materials and able to design the set to the specification provided by the SM. They need to ensure that the design of the set and the way it is constructed is safe and that no harm will come to the actors when they start rehearsing and performing on the set (Baker, 1968:82). Gillett and Sheehan (2017:97) also add that the technical director is responsible for overseeing the safe construction of scenery, rigging, as well as writing and maintaining the shop safety manual.

3.11 STAGE PROPERTIES (Props)

Stage properties are the collective name for everything on stage that is not décor, lighting, costumes, sound or an actor (Thrice, 2017). Stage properties can thus be anything that the actor will use on stage during the performance, such as a telephone, a mug, a gun or a hangman's noose (Gillette, 2008:311). The standard procedure is that a props master is appointed with the sole responsibility of getting or making the props and ensuring that all props are on their marked spaces on the props table backstage.

Stage properties are the tools used to provide a clear idea of the period of the play as well as the personality and social status of the actor using them (Gillette, 2008:311). Some stage properties are so important that without them, the play will virtually be something different than intended altogether. Props must be well designed or chosen, well made and robust (Harris, 1976:7).

Just like the set and costumes, props need to be researched to represent the real thing on stage accurately. The props designer must first read the play and make a list of all the props required for the play; that way, the designer knows what is needed and what will require attention first. If a play is set in a historical period, the prop designer must first research the props to establish the correct form and look of the prop so that it can look historically accurate (Harris, 1976:9).

Props can be classified into five types, namely: set props, hand props, decorative props, personal props and costume props.

Set props – Set props are large movable objects that are used in several ways by actors (Gillette, 2008:312). This can include anything from furniture, rugs or lamps.

Hand props – Hand props are small items carried by actors, such as letters or books (Gillette, 2008:313).

Decorative props – Also known as dressing, this type of prop is on stage purely for decorative purposes (Harris, 1976:16). They are used to enhance the setting, for example, paintings, ornaments or a bookcase (Gillette, 2008:313).

Personal props – Personal props is the responsibility of the actor and are usually small things like walking sticks, money or a pen (Harris, 1976:16).

Costume props – The actors wear these; for instance, jewellery or a watch (Harris, 1976:16).

3.11.1 Props design and construction

Not all props need to be designed and constructed, and some can be bought, borrowed or rented. **Real or fake** – If an actor is going to handle a prop, it must feel real (Gillette, 2008:314). Props can be altered by, for example, painting or staining the cover of a book. If an actor does not use a prop, it can be fake (*ibid*).

Building props – Every production has some props that need to be built or altered. The property designer will sketch the desired props with specifications and dimensions indicated so that the prop can be built to scale (Gillette, 2008:315). Gillette (2008:316) further adds that by using paint, dyes, bronzing powders and spray paint, a new prop can be turned into an old and decrepit prop.

Buying props – When props cannot be built, borrowed or pulled from stock, only then will they be bought (Gillette, 2008:316). According to Harris (1976:13), buying a prop can save you money in the end, since renting a prop cost much money, and you generally cannot alter them.

Burrowing and Renting props – One thing to keep in mind is that props endure a lot of stress and wear during rehearsals and the final performance; thus, when renting or borrowing props, the person needs to be extra careful with the props (Gillette, 2008:316). A signed contract should exist between the two parties (lender and theatre) that stipulate the condition the prop must be returned in.

Pulling props – Many theatres has a props room where all the props from previous productions are stored. These props can be used in different productions with alterations if necessary, or until the right prop is built (Gillette, 2008:317-318).

Props construction – A wide variety of construction skills are used in prop construction that overlaps to some extent with other areas in the theatre; for example, set construction or costume design.

Paper-mâché is the oldest and cheapest craft technique used for making props in the theatre. This technique involves shredded paper dipped in a wheat paste and applied to the mould. Between three and six layers are usually needed. However, this craft form has some disadvantages; for instance, these moulds are generally very fragile, and they take a long time to dry (Gillette, 2008:331).

Vacuum forming is the process of shaping plastic through heat application and vacuum pressure. A vacuum-form machine is used, which consists of a sheet of plastic heated until flexible over an oven and then placed over a mould while hot, and the valve of the vacuum reservoir is released. This is a very flexible system used for making both props and scenery decorative items (Gillette, 2008:333).

Moulds can be used to make multiple copies of a variety of objects. Moulds can be divided into two categories: rigid moulds, which are used for objects that do not have a lot of detail, and flexible mould that is used for detail (Gillette, 2008:335).

Heat forming refers to heating plastic until it becomes flexible enough to bend. The plastic can then be formed over a mould or clamped until it cools down (Gillette, 2008:336).

3.11.2 Organising props for a production

Organising the props is done in a similar way to a lighting design or a costume chart. The first thing that needs to occur is to create a property list; this must be a complete list of all the props required for the entire play (Gillette, 2008:319). The preliminary props list will be

modified many times before the final performance. Once specific props have been decided on, the props can be manufactured. During this time, the properties master will also pull some props from storage that the production can use or modify (Gillette, 2008:321). Gillette (*ibid*) adds that the general rule when it comes to props is; 'if you can carry it, it is a prop'.

Rehearsal props – Not all props will be finished before rehearsals start; thus, a rehearsal prop is used until the final prop is complete. These props are more or less similar to the intended prop and can serve as a double during the show (Gillette, 2008:322). Unique items, for example, a sword or gun, must be used as early as possible during rehearsals because special techniques need to be practised for handling these select type of props (*ibid*). Rehearsal props are important in terms of the actors getting used to the type of prop they will be using during the performance. A prop can become a weapon in the hands of an actor who is not familiar with the prop, and this can become a hazard for the rest of the crew.

Running props – Running props refer to the list of props used in the production, where they are stored, where they are placed on stage or the props table backstage and the name of the actor that uses each prop. With running props, a prop table will be created with specific allocations for each prop marked on the table. The props master and SM is responsible for this table and needs to make sure everything is in its place at all times (Gillette, 2008:324). A props list for each scene and character should also be present so that the props master knows precisely when an actor will use a prop (Harris, 1976:8). A props master must keep an eye on the props table to ensure that the actors take the right prop at the right time and not fool around with the props. It is normal for actors or even the technical crew to want to play with the props, but if dangerous props such as weapons or guns are involved, it can become problematic for the rest of the cast and crew.

3.11.3 Props safety

Bladed weapons – Nel (2001b:14) lists five requirements that all bladed weapons need to adhere to in his appendix. These requirements are:

1. All blades must be properly balanced, and the points must be blunt.
2. The handles must provide a secure grip.
3. Retractable weapons must be kept separately from non-retractable weapons, and they must be marked to avoid confusing the one for the other.
4. The artists must always use the same weapon for each rehearsal and performance.

5. The artists must check their weapons before every rehearsal and performance in the presence of the props master.

Life Goes on Productions⁷ (2016: online) made a video on how to build your retractable stage knife. This knife was made with everyday materials that you have in your garage. The key is not to screw the outsides of the handle too tightly; otherwise, the blade (dulled) will not retract.

Firearms – In his appendix, Nel (2001b:20-21) provides a list to ensure safe usage of a firearm:

1. All firearms must always be treated as loaded and live ammunition must never be used.
2. Only the person responsible for the firearm must have an appropriate licence and be familiar with the loading and unloading of the weapons.
3. If a misfire or jam occurs, only the responsible person (weapons master) must attempt to fix it. If the problem or cause is unknown, the gun must be taken out of use until the issue is resolved.
4. The firearm must, under no circumstance, be pointed directly at anyone.
5. All personnel must be notified that a weapon will be fired.

To these precautions, a few might be added. If firing a blank round, one should remember that although there is no bullet to be propelled as a result of the explosion, these special cartridges still contain gunpowder that explodes. This flame can set curtains alight or seriously burn a fellow actor if fired directly at the person. So make no mistake, blanks can kill and be the cause of accidents.

There have been many accidents in the theatre in the past and still, today, relating to stage properties. Some of the notable accidents that occurred globally include the case of the Italian actor, Raphael Schumacher, as highlighted by Khomani (2016:1-3). Schumacher was pronounced clinically dead after a hanging scene during a production went wrong. Schumacher was reciting a monologue from Frank Wedekind's *Spring Awakening* and ended the scene by placing his head in a noose. A medical student in the audience noticed his legs shaking and sounded the alarm. The noose should have been fake, and a harness should have caught him if he fell, but safety precautions were either ignored or inadequate. After undergoing a six-hour examination, Schumacher was pronounced brain dead, and his organs donated (Khomami, 2016:1-3).

⁷ Life Goes On Productions - <https://www.youtube.com/watch?v=BWCPcret5FY>

In 1998 during a performance, David Rendal stabbed another singer in the stomach with a supposedly retractable knife causing it to enter three inches into the abdomen of the singer. He required surgery but made a good recovery (Roberts, 2010:1).

During the performance of Schiller's *Mary Stuart* in Vienna in 2008, an actor was supposed to cut his throat, only to discover that the knife was razor sharp. The audience cheered for the lifelike performance, not realising what was happening on-stage (Roberts, 2010:2).

3.11.3.1 Who is responsible?

The person responsible for the props is the property master, who needs to have extensive knowledge in turning ordinary objects into extraordinary props when constructing the props. If anything were to go wrong with the prop, it is the property master who has to find the solution. The SM provides a list of props to the property master, who puts the props together (Baker, 1968:84).

3.12 COSTUMES AND WIGS

According to Brockett and Ball (2011:385), costumes define the characters within the scenic environment of the stage. Gillette (2008:438) adds that anything worn onstage is considered a costume. Brockett and Ball (*ibid*) further comment that costume designs have four functions, namely to:

- define the characters and their relationships;
- establish time and place;
- suggest mood and atmosphere; and
- alter an actor's appearance and movements.

According to Reid (2001a:89), a wardrobe plot containing an actor-by-actor, scene-by-scene inventory of all the costumes in sequence will help minimise the stress of figuring out who needs to wear what when. Costumes are designed to visually reinforce the emotional, mental, and physical traits of a character (Gillette, 2008:440). Baker (1968:225) adds that when costumes are not specifically designed for a particular character, then the costumes can be hired from an outside source (theatrical costumer).

3.12.1 Costume design

Before the costumes can be designed, the costume designer must first read the script to understand what is needed according to the text. The costume designer and the director will also consult on the overall visual image and style of the costumes. Gillette (2008:440) emphasizes that a costume needs to be designed to fit and work with an individual actor.

Design process – There are six stages of costume design: analysis, research, incubation, selection, implementation and evaluation.

1. **Analysis** – Before a person can start with the design, specific questions need to be asked, namely:

- What is the costume budget?
- What is the production budget?
- What is the period the production is set in?
- When is the first dress rehearsal?
- Does the director want a costume parade?
- What does the set look like, and what is the colour palette?
- What is the lighting designer's colour palette?

Many of these questions will be answered when reading the script; others will be answered when meeting with the director (Gillette, 2008:439).

2. **Research** – two types of research is done, background research and conceptual research. Background research is done after reading the script. This type of research focusses on history where the designer will look at items made and worn in that specific time. Sometimes the actual clothing item cannot be examined, and so photographs will have to do. During the conceptual research phase, the designer needs to visualise potential solutions to specific design challenges that may occur. Many ideas are sketched, and a variety of materials is looked at (Gillette, 2008:439).

3. **Incubation** – In this stage, the designer needs to leave the work for a while. The designer needs to get away from the project for a while to look at it with new eyes the next time (Gillette, 2008:439).

4. **Selection** – When the designers have selected the overall concept for the production, they also need to choose the right design ideas for each character (Gillette, 2008:439).

5. **Implementation** – For the implementation phase, the designers need to select the colours and fabrics for each design (Gillette, 2008:439).

6. **Evaluation** – In this stage, the designers need to step back and evaluate the design concept and look for possible improvements (Gillette, 2008:439).

3.12.2 Making of the costumes

Costume creating is not just a matter of buying fabric and patterns and making a costume; the process of making a costume is much more complicated (Gillette, 2008:461). Reid (2001a:89), states that, whether a costume is made 'in house' or hired will depend on the type of production company. Everything mentioned below is needed to create the perfect costume for specific performances.

Basic Equipment – Some equipment is an absolute must when it comes to costume making: cutting table, dress forms, washing machine and dryers, irons and ironing boards, steamer, mirror, and a sewing machine (Gillette, 2008:462-464).

Each of these basic equipment instruments needed to create a costume can be hazardous. The washing machine and dryers have electric hazards where the cables can become worn out because of the movement of the machines, which can result in electric shock. The iron and steamer, on the other hand, are scorching and can send anyone to the emergency room with burn injuries if the iron or steamer is not handled with care and switched off when not in use. As with the sewing machine, only a qualified person should handle the sewing machine, because of the danger the needle holds for an untrained person's fingers.

Sewing equipment – Every costume shop needs the following basic sewing equipment: measuring devices, hand needles, thread, thimbles, straight pins, safety pins, tracing wheel and paper, tailor's chalk, shears and scissors, zippers, Velcro, a hot glue gun, and seam-binding (Gillette, 2008:466-467).

The sewing equipment has a lot of sharp pins and edges that have the potential to be dangerous. All the needles, straight pins and safety pins tend to prick you - but luckily, thimbles were created to help protect your fingers from harm. Shears and scissors have the potential to cut you when it is least expected and has the potential to be a lethal weapon when used in an attack. Lastly, the hot glue gun can become a nightmare in an untrained hand. The glue itself is very hot, and even the gun itself can burn you, causing some harm (Gillette, 2008:466-467).

Fabrics – Choosing the right fabric to create the costume is essential. According to Gillette (2008:467), costume makers must understand how fabrics work, since each fabric has its characteristics. There are two types of fabrics; namely, natural fabric and synthetic fabric.

Natural fabric

Wool – Wool is the oldest used fabric that can either be cosy and warm or itchy and scratchy. Wool is obtained from the fleece of sheep, and two types of yarn exist; namely woollen and worsted (Gillette, 2008:468). Woollen yarn is loosely twisted and traps air making it an excellent insulator, whereas worsted yarn is tightly twisted and breathes well. According to Carver (2013:313), wool is dirt resistant, flame resistant and does not wrinkle - making it the ideal fabric to use for beautiful clothes. Wool is a natural fire-retardant material that is difficult to ignite. Moreover, flames are extinguished by the fibres in the wool (Whaleys, n.d.:4).

Cotton – Cotton has been used for over 3 000 years to make clothes because it breathes well (Gillette, 2008:468). Carver (2013:313) adds that cotton can withstand high temperatures and dyes easily, which is ideal in theatrical design. According to Whaleys (n.d.:4), cotton ignites quickly, and the flames spread rapidly.

Silk – Silk is a natural fibre taken from the cocoon of the silkworm. Silk is cool in the summer and warm in the winter and quickly absorbs dyes. It drapes well, retains its shape, caresses the figure and shimmers on its own (Carver, 201:313). Melone (2017:2) adds that silk is highly flammable - just like cotton and linen.

Linen – Linen is stronger than cotton and made from the flax plant (Gillette, 2008:468). According to Carver (2013:313), linen is an absorbent and very luxurious fabric and a great heat conductor. It is also easily dyed, and the colour does not fade when washed. According to Whaleys (n.d.:4) linen, as with cotton, is quick to ignite, and the flames spread quickly.

Synthetic fabric

Acrylic – According to Gillette (2008:468), the acrylic fabric is a combination of coal, petroleum and other materials. It is soft and lightweight, but it does not dye well. Acrylic is wrinkle-resistant, holds its shape well and needs little to none ironing. Acrylic is also flame resistant and does not burn but melts - resulting in potential burn hazards (Melone, 2017:2).

Rayon – Rayon is one of the first synthetic fibres created in 1910 (Gillette, 2008:469). It is easily dyed, feels smooth, does not hold heat and is a cheap imitation of silk (Carver, 2013:316).

Acetate – Acetate is usually used for draping, has little strength, but it is wrinkle-resistant (Gillette, 2008:469). Carver (2013:316) adds that acetate breathes well and can be dyed into deep brilliant colours. Melone (2017:2) remarks that acetate is as flammable as cotton, but can be treated with a flame-retardant chemical.

Nylon – Nylon is a light, strong and elastic fabric that wrinkles easily. Heat transmission depends on the type of weave of the material: smooth tight weaves trap heat, while loose open weaves do not (Gillette, 2008:469). Melone (2017:2) adds that nylon does not burn; it melts - resulting in potential burn injuries.

Polyesters – Polyester is a petroleum-based product that is the most widely used synthetic fabric (Carver, 2013:316). It is highly wrinkle-resistant as well as stain-resistant, but it does not dye well (Gillette, 2008:469). According to Whaley's (n.d.:4) polyester is slow to ignite and melts rather than burn, which may lead to severe burns when people are wearing clothes made from it.

Fabric dyeing – Since not all dyes work equally on all fabrics, many forms of dye exist. Four types of dyes can be used, namely: union dyes, aniline dyes, disperse dyes and fibre-reactive dyes.

Union dyes – Union dyes are used for most fabrics, and when used in boiling water, a medium colour can be achieved. This type of dye will never give an intense colour, but to maintain the new colour, the fabrics should be washed in either cold water or dry cleaned (Gillette, 2008:478). Dye powder inhalation can be a problem when the dye is handled inappropriately.

Aniline dyes – Aniline dyes, also known as an acid dye, creates intense colours in a wide range. Either vinegar or salt is used as a setting agent (Gillette, 2008:478-479). The aniline dye can be corrosive when in contact with skin, but also inhalation or ingestion of the dye can be hazardous to your health (Gillette, 2008:478-479).

Disperse dyes – This type of dye is used on synthetic fabrics and produces an intense colour when the water is at boiling point. Liquid detergent is used to help the dye penetrate the fabric fibre (Gillette, 2008:479). Disperse dyes are known for causing skin allergies when in contact with skin (Gillette, 2008:479).

Fibre-reactive dyes – This is the most used form of dye because the dye produces an intense colour when the water temperature is lukewarm. Salt is used as the setting agent (Gillette, 2008:879). Fibre-reactive dyes can cause respiratory allergies, which can cause severe allergic reactions (Gillette, 2008:879).

Wigs – Reid (2001a:93) states that wigs and hairpieces fall under the costuming department as it helps tie the whole outfit together. Wigs are used to achieve the correct hairstyle according to the period of the play (Gillette, 2008:482). Wig-making is an intricate craft that requires patience and experience. According to Gillette (2008:482-483), many types of wigs can be used:

- Ventilated hair is added to the hairline to give the illusion of real hair.
- A hard wig has a more rough texture and starts abruptly, unlike a ventilated wig.
- A period wig can be rented from a theatrical costume supply house or can be made using synthetic or real hair.

Gillette (2008:484) further adds that the wig stylist works closely with the costume designer to ensure a unified costume. Wigs run the risk of becoming too heavy, causing neck problems and headaches. Improperly placed wigs can also cause hair loss and damage (Gillette, 2008:484).

Jewellery – When working with jewellery, it is crucial to adhere to the shape, size and materials of the given historical period (Gillette, 2008:487). Gillette (*ibid*) further adds that simplicity and the right amount of exaggeration are the keys to good stage jewellery and ornaments. Furthermore, every costume workshop should have a box full of ‘junk jewellery’, because even though it looks fake and gaudy up close, onstage it looks rich and elegant (Gillette, 2008:488). Jewellery can get caught on the costume or a piece of furniture, which can injure an actor badly, depending on the placement of the caught jewellery.

Masks – According to Gillette (2008:489), masks can be made from a variety of materials, the most common being plaster bandage, fabric form, thermoplastics and liquid latex. Plaster bandages, fabric forms and thermoplastics are used for rigid shells, while liquid latex is used for a more flexible mask (*ibid*). All these materials can be used to make an exact fit for an actor’s face. A mask can be a bother that can hinder an actor’s sight, and so cause problems for the actor and the technical crew around them.

3.12.3 Costume safety

Fabric dyeing can be very dangerous. Powdered dyes, as well as vapours from dyes that are in solutions, can be inhaled. A material safety data sheet (MSDS card) must always accompany any dye as it consists of different chemicals used to create specific colours. When dyeing fabric, you are responsible for your safety as you should not use dye you are unfamiliar with (Gillette, 2008:477-478).

Other than the dyes, there are many hazards in the costume shop. From sharp scissors, needles, sewing machines and hot irons to the less obvious but still dangerous fabric lint and chemical fumes (Gillette, 2008:481). According to Gillette (*ibid*), when you are working with fabric, whether it is straightening the fabric, cutting the fabric or sewing the fabric, tiny amounts of lint is released into the air. Either the lint keeps floating in the air where it will float to the ground, or you inhale it; that is why a costume workshop should be well ventilated.

3.12.3.1 Who is responsible?

The wardrobe mistress is responsible for anything about costumes. The wardrobe mistress makes the new costumes designed by the costume designer and renews the old. The wardrobe mistress is responsible for repairing any defects found in the costumes during rehearsals. The SM provides a list of the costumes required and consults with the wardrobe mistress about the changes in costumes (Baker, 1968:86-87).

3.13 SPECIAL EFFECTS

Special effects are handled by specific people qualified to handle these special effects.

3.13.1 Projections

According to Gillette (2008:426), projections enhance the visual aspects of design, and with current technology, it is possible to use videos as well as images. Morgan (1995:81) asserts that although projections can be useful, there can be some difficulties that can restrict or influence a play. He states that image distortion can be a problem, together with the placement of the projector. A front projector gives the best image, and it can be challenging to place the projector so that the actors do not walk through the beam. This also means that lighting must be positioned to not interfere with the projector and bleach out the image.

Gillette (2008:426) further states that there are five things to keep in mind when using a projector, namely:

1. Keep ambient light off the screen to prevent the image from being washed out.
2. To avoid actors blocking the screen from the audience's view, place the screen more or less 1.5 meters from the floor.
3. To maximise the brightness of the projector, keep the size of the projector as small as possible.
4. Rear-screen projectors are less affected by ambient light than front projectors.
5. Familiarise yourself with the equipment before the technical rehearsals begin.

Gittins (n.d.:1) comments that there are a few hazards that accompany projectors, namely:

1. Projectors heat up very fast and can thus be very hot to the touch.
2. Because of the heat, metal and plastic parts can release toxic chemicals that can be released through the ventilation openings.
3. A build-up of dust inside the projector can also cause the projector to overheat and, in extreme cases, catch fire.

3.13.2 Strobe light effects

According to Reid (2001b:209), a strobe light is a device giving a short series of light flashes under which action appears frozen or in slow motion. Under this light, the actor's movements appear jerky and similar to an early silent movie. myRisks Information (2017:2) cautions that only a competent person may set up a strobe light and that the flash rate should be kept at four flashes per second.

Reid (2001b:188) further adds that this effect must be used sparingly, as it can cause a condition similar to motion sickness or it can even induce fits, especially in those who have epilepsy. According to myRisks Information (2017:1), strobe lights can cause vision problems that can, in turn, lead to trips and falls. Audience members should be informed in advance, when purchasing tickets that strobe lights are going to be used during a production and the SM should remind the audience of this fact before the start of the show.

3.13.3 Smoke or fog

Reid (2001b:190) warns that smoke that produces acrid fumes must not be used on stage. According to Morgan (1995:84), smoke is used to create an atmosphere on stage or allow the light beams to be seen. Smoke also acts as a diffuser to reduce the intensity of the light.

Morgan (*ibid*) adds that there are two ways to create smoke with dry ice or by vaporising a water-based glycol fluid.

Dry ice – Carver (2013:392) states that dry ice is solidified carbon-dioxide that will burn you if you pick it up without gloves. The dry ice hangs on the ground across the stage, creating rolling mist (Reid 2001b:190).

Vaporising fluids – Morgan (1995:84) explains that smoke created by vaporising liquids hangs in the air and is made by pouring glycol fluids into a heater that produces the smoke. Reid (2001b:190) adds that this is done by using a smoke generator.

According to Reid (2001b:190), using smoke must be rehearsed and carefully dispersed as it is very unpredictable. What was intended to enhance the performance, may end up killing the success of the performance. Sellery (2011:73) adds that only an experienced individual with knowledge on how to handle dry ice or vaporising fluids may handle the materials.

When using dry ice or vaporising fluids, it is important to take into consideration the health effects it might have on some of the actors, as well as members of the audience. Smoke can cause breathing problems or discomfort when inhaling can affect people who have asthma or any kind of lung problem as if they cannot get enough oxygen into their body (Sellery, 2011:73).

3.13.4 Fire

Creating a fire on stage by using lights is not challenging. Using an ordinary grate and adding one or two light bulbs covered in deep amber and segments of red, constructs the fire. Electric fires are created using reflectors and imitation coal (Baker, 1968:204).

Baker (*ibid*) adds that although the fire will appear real, it may not be enough, so to create the impression of firelight, a baby spotlight is hidden on a stand and shine through the opening of the fireplace. Maccoy (2004:226) states that a real flame will only be allowed if the action of the play requires it. Nel (2001b:20) cautions in his appendix that if a real flame is used on stage, the local fire department must be informed and the appropriate fire-fighting equipment and a fire marshal must be present backstage.

3.13.5 Who is responsible?

The backstage theatre personnel, as well as the SM, is responsible for these special effects. One person must always be nearby whenever these effects are used, and that person must be trained in basic first aid to help if there is an emergency.

3.14 ACTORS

According to Boleslavsky (2010:82), the theatre is the actor, and the actor is the theatre. An actor will need four qualities, namely: talent, intellect, will and emotions. All these qualities will enable an actor to live through his role (*ibid*). Merlin (2010:5) adds that humans want someone to witness our lives and stories. Acting is a way to display our stories and maybe influence the spectators. According to Brockett and Ball (2011:345), acting is an extension of everyday human behaviour.

3.14.1 Actors on stage

Behaviour-based safety is a key element for every production. Deming (1992) in NOSA (2012:46); devised 12 principles that are equally important in keeping everyone that is part of the production team safe:

1. The actors, along with the director and technical crew, must continuously be safety conscious.
2. Safety should not be neglected but instead practised on- and off stage.
3. Safety is not common knowledge, and it is something you learn.
4. Every minor incident must be reported.
5. Safety should be a value, not a priority, with no compromise.
6. Human nature typically encourages at-risk behaviour; thus, safety is in a continuous battle.
7. Behaviour is learned; thus, you learn safety by example.
8. People believe that accidents will never happen to them; that is why safety should always be kept in mind.
9. Identify safety hazards as a group and find solutions as a group.
10. For every action, there must be a consequence; in other words, the actors must take ownership of their actions and face the consequences.
11. Due to the familiarity of theatre, many hazards may be underestimated.
12. Lead by example.

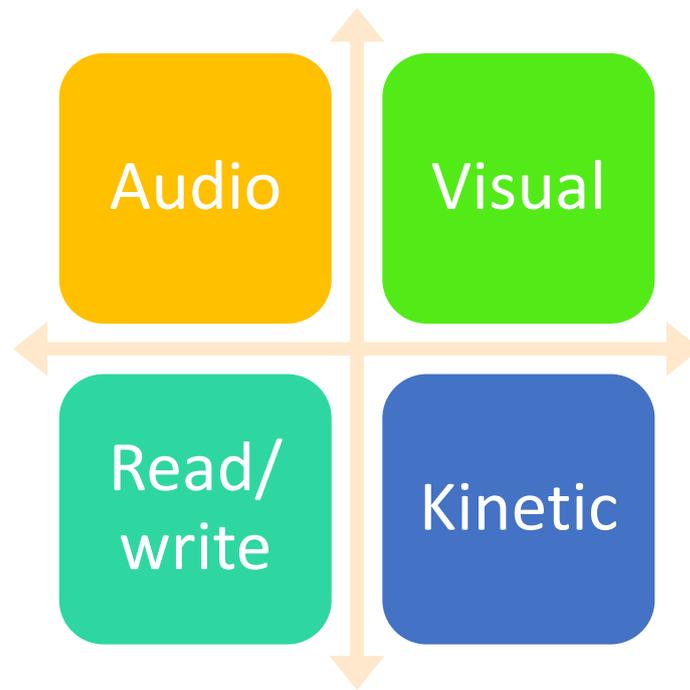


FIGURE 3.7: LEARNING STRATEGIES TO IMPLEMENT SAFETY CONSCIOUSNESS
 (Compiled by Hattingh, 2020).

According to Shayla and Sophia⁸ (2014: online), dangerous activities such as running, practical jokes and throwing tools and other material are not allowed on- or backstage, as accidents tend to happen. Maccoy (2004:214) adds that actors will often try out new actions that may have implications for their health and safety. These actions might seem fine in the rehearsal room but can prove problematic when applied on stage.

Rehearsals always start in the green room or a smaller venue and only moves to the stage later in the rehearsal process. The rehearsal process can be a voyage into the darkest part of your soul, or it can be a journey of creativity (Merlin, 2010:93). Brockett and Ball (2011:359) remark that it is usually only during the dress rehearsal that actors finally can rehearse with the rights props, costumes, makeup, stage setting and lighting. Careful attention must be paid to the costumes since it can hinder an actor's movements and gestures.

3.14.2 Actors' safety

Actors' safety must come before all else. It is imperative to employ safety precaution throughout a fight scene and revise or exclude moves that are particularly dangerous, no matter how good the move looks (Hobbs, 1980:19). According to Martinez (1982:2), a safe

⁸ Shayla and Sophia - <https://www.youtube.com/watch?v=j983mEumWns&t=51s>

and progressive combat session needs to maintain an open and constructive environment for criticism. Partners can help each other refine reaction and improve timing; thus developing a mutual accuracy during a combat session.

Martinez (1982:14) provides a simple procedure for planning and rehearsing a stage fight:

1. Read the description of the action,
2. mimic the foot placement of the attacker and victim,
3. repeat movements such as gestures and body placement in slow motion,
4. once the technique is mastered, practice with a partner must be undertaken,
5. after a few sessions, speed up the sequence to half speed to help with synchronisation between partners, and
6. a fight combination can now be implemented and rehearsed.

A crucial part of creating a fight scene is that enough time must be dedicated to the rehearsal of the sequence.

Hobbs (1980:20) further adds that there are 10 points to remember about safety during a fight:

1. Never speed up a sequence before all the actors are comfortable with the moves.
2. Always work in a good light.
3. Wear non-slip shoes, and when in costume, wear shoes with rubber soles.
4. When working with swords, concentrate on not getting too close to your opponent.
5. See to it that all handles of the weapons are covered in non-slip material such as leather. Resin for the hand is an added safety precaution.
6. Make sure that the floor is not slippery.
7. If possible, wear gloves, preferably made of chamois leather, when working with swords.
8. Always sweep the stage floor before a rehearsal or performance to avoid any debris or screws that could prove hazardous.
9. Warm-up before a performance, using the actual weapons.
10. Never change your weapon without a proper rehearsal as the different weight or balance can be a potential danger.
11. A retractable knife must always be kept in good working condition (cf. 3.10.3).

Hobbs (1980:70) conclude that it is important to pay close attention to the weapons and fashion of that time. Authenticity must always play a secondary part in what is theatrically acceptable (Hobbs, 1980:70). When using swords or knives in a production, a professional fencing instructor will be consulted to achieve optimal fight safety when doing a sequence

with swords or knives. Minor compromises must follow the correct stance and movements. Being as truthful as possible, based on research on a particular period is the acceptable solution (*ibid*). Sellery (2011:89) comments that only weapons specifically designed for the stage may be used on stage. Nel (2001b:55) provides a list in his appendix of the requirements weapons need to meet when used in a production:

1. Never indulge in horseplay when handling a weapon, as all weapons are dangerous.
2. Only weapons specifically designed for the theatre may be used.
3. The fight director is responsible for determining the safety of the weapons.
4. A fight run-through is recommended before each performance.
5. When not used, the weapons must be rendered safe.

Yale University (n.d.:2) provided a list of banned props and stage actions:

1. Functional firearms and live ammunition, including blanks, are banned. Sound effects are preferable.
2. Any sharp blades, swords, knives, arrows, or axe may not be used unless the blades are dulled and unable to cut anything.
3. Working bows, crossbows or any other weapon capable of shooting a projectile is banned; only weapons incapable of shooting a projectile and used for visual effects are allowed.
4. Using a noose or the act of tying someone in a locked enclosure is banned.
5. Any weapon not approved by the weapons master may not be used under any circumstances.

Martinez (1982:206-209) also add that some injuries such as bruises, swelling, strains, dislocations, broken bones, head injuries, black eyes, cuts and abrasions are common when dealing with the implementation of stage fighting. The SM must always be on hand with a fist aid kit; the SM must also be certified as a first aider when fight rehearsal occurs (Martinez, 1982:206-209).

3.14.3 Stage combat and choreography

Throughout history, stage fights have been used in the theatre (Hobbs, 1980:9). Up until recently, a Master of Fence was usually employed in theatres and art schools who taught stage combat (Hobbs, 1980:9). Nowadays, a specialist, namely a fight director, will be consulted when there is a need for a fight scene in a particular production. Yale University (n.d.:1) adds that although stage combat is thought of as a physical confrontation in which bodily harm is projected, any depiction of self-injury, sexual assault or any form of stunt

work is considered part of stage combat. Stage fights require much meticulous planning and choreography. Stage combat is taught at several universities or institutions across the world. Universities such as Rhodes University and the University of Pretoria are two examples of universities in South Africa that present stage combat as part of their syllabus.

The rules of the University of Florida (2020:1-2) are quite clear when it comes to staging combat. Actors and students must be dressed appropriately (comfortable, casual, non-binding clothes, no skirts, tight pants, no jeans, or fragile clothing). Jazz shoes and thin leather gloves with fingers are required—no hats and no jewellery, especially facial and naval piercings. Participation is mandatory, and students or actors are required to practice the sequences in their own time as well.

As with many other specialised fields of the theatre, the first step that needs to be taken towards stage combat is to read the play. No two characters move or react the same, and to understand their personalities and the way they fight, you need to be familiar with the text (Hobbs, 1980:12). Initial discussion with the director, set and costume designer must take place before the fight planning can commence. According to Hobbs (*ibid*), set and costume designers are of particular importance for they can both either aid or hamper the action. Constant communication between the different areas of the theatre is needed because set and costume alterations can be expensive. In contrast, fight moves can easily be altered to accommodate the set and costumes used in the play.

Rehearsal time – When scheduling rehearsal times for stage fights, it is safe to assume that everything will take three times as long as initially thought (Martinez, 1982:186). According to Martinez (1982:186), eight questions must be answered to establish the amount of rehearsal time needed:

1. What is the basic skills level of the actor; have they been in stage fights and have you worked with them before?
2. Are the actors fit?
3. Are they quick studies?
4. Do they have any violence phobias?
5. Do they listen to direction, or are they temperamental?
6. How many fights must be learned?
7. How long will a fight last?
8. Will unique or challenging techniques be incorporated into the fight?

By answering the questions above, a rehearsal timeframe can be scheduled mainly for the fight scenes, which must be rehearsed every day until the show opens. Nel (2001b:44) adds in his appendix that adequate rehearsal time must be provided for particular actions, and these actions must be rehearsed under production lighting conditions and not only under work light conditions.

Fighting Patterns – Stage fighting is all about creating patterns to give the audience a clear picture of the fight. People positioned in a fight will not remain in a fixed position; they will move either to attack, retreat, to gain advantage or to find higher ground. The characters will move, and these moves will be planned (Hobbs, 1980:14). The overall goal is to make the movements seem as natural as possible and not planned. The audience needs to see the emotions that drive the character to move. Hobbs (ibid) adds that, even with the use of a weapon, patterns are created. Patterns created during a fight need to have a variety of moves to ensure that the fights do not become boring to the audience.

When all these elements are taken into consideration, the fight scene will create a *violent dance* on stage.

3.14.4 Who is responsible?

When it comes to responsibility, the stage combat choreographer is responsible for the actors during the fight scenes. Still, overall, the actor must ensure his safety as well as that of his fellow actors. Only the actor can ensure that their actions do not endanger anyone around him.

In the next section, attention will be paid to action to be taken in serious emergencies in the theatre.

3.15 SAFETY PRECAUTION AND PROCEDURES IN CASE OF EMERGENCIES IN THE THEATRE

A critical section in this chapter is the safety precautions, the working and uses of firefighting equipment in the theatre and evacuation procedures in case of an uncontrollable emergency. The most dangerous safety hazards, like fire or smoke in the theatre, an attack or any disaster of nature, like an earthquake, does threaten not only the lives of theatre staff and artists but also the lives of the audience.

The theatre staff and artist must know the theatre and escape routes. The audience is not so familiar with escape routes. Therefore, the most dangerous circumstances develop when the audience starts panicking, and disorderly try to exit the theatre, trampling fellow audience members to the ground.

Fire prevention methods must be in place to avoid injury in a fire emergency and that crew, theatre staff and artists know the working of preventative measures and equipment and evacuation procedures. The danger in university theatres is that new students come to the university every year. Permanent staff and older students know the rules and procedures, and they might assume that all (new) students are also informed and might neglect to transfer this knowledge to new students.

It is therefore critical that Theatre Safety must be part of the curriculum and that the basics be taught and demonstrated in the first year of study. At least one evacuation exercise should take place during the rehearsal period of every production—more about evacuation procedures during an uncontrollable dangerous situation under 3.15.6.

In his appendix, Nel (2001b:22) supports this notion and states that all theatre personnel should be trained in basic firefighting skills and that all equipment must be accessible with no obstructions and be inspected regularly. According to Blackburn, Conroy, Kyle and Peters (2011:29), the theatre should have a written emergency procedure with regular fire drills to test the functionality of the evacuation plan, but also the fire protection system. Wheelley (2009:160) adds that exits and entrances should be marked clearly and unobstructed. All these requirements are present in the example of the Wynand Mouton Theatre (UFS), *cf.* appendix A for photo evidence.

The first action in case of a fire in the theatre is for the SM to alert the fire brigade. However, if it is possible and the fire is controllable and can be extinguished without danger to staff and actors in the theatre, immediate action should be taken under the command of the SM to extinguish a controllable fire while the fire brigade is on its way. As basic training to all students, professional actors, crews and theatre staff, it is imperative that, as a preventative measure, they all should know how a fire starts, how the fire extinguishers work and for what type of fire the extinguisher is designed.

3.15.1 Procedures during any emergency evacuation

In the case of an emergency, a simple evacuation procedure must be followed for a smooth evacuation:

- The SM must give the cue for the house lights to be switched on.
- The SM must give the evacuation speech and calmly explain the evacuation procedure.
- The SM must initiate the evacuation procedure backstage while the FOH manager initiates the evacuation of the auditorium *cf.* appendix A for an evacuation plan.
- If possible, a check must be done to ensure everyone has evacuated the theatre.
- Close all the doors behind you to minimize oxygen in the building.
- Account for the cast and crew outside the building at the emergency assembly point.

3.16 CHAPTER 3 CONCLUSION

In this chapter, the general SH's that might occur in the backstage area of a theatre during the pre-production, rehearsal and final performance phases (set and props construction, move-in, the setting of lights, plotting, choreography, stage fights or use of props) were stated and identified. Basic procedures on how to handle and avoid the potential SH's were explored and can be used by any trained person connected to the theatre. The identification of the potential SH's will help the researcher when identifying the potential SH's in the three chosen texts.

In the next chapter, Chapter 4, titled **Script analysis**, the texts of the three chosen plays namely, *Noises off (2001)*, *Macbeth (1606)* and *Dogg's Hamlet (1979)* will be analysed from a technical point of view to establish any possible safety hazards in the texts.

CHAPTER 4

SCRIPT ANALYSIS AND DISCUSSION

4.1 INTRODUCTION

In Chapter 3, **Conceptualisation and contextualisation of safety in the theatre**, the literature study, the researcher discussed the general SH's that might occur in the theatre with a specific focus on the backstage area of a theatre during the pre-production, rehearsal and performance phases. The focus was primarily on the set design, the use of lights, props, costumes and special effects and the dangers that can occur when actors are added to the combination. The chapter concluded with the causes and dangers of fire, and procedures in case of any severe emergencies that might need evacuation of theatre staff and the audience.

This chapter reflects on an in-depth text analysis of *Noises off* (2001), *Macbeth* (1606) and *Dogg's Hamlet* (1979). The script analysis will assist the researcher in understanding the meaning, content and given circumstances of each text. This again will help the researcher to identify potential safety hazards in each text of the three selected plays. The general hazards, as determined in Chapter 3, will further assist the researcher during the analysis to identify the particular hazards in each text.

4.2 SCRIPT ANALYSIS TECHNIQUE

Script analysis is the tool artists use to interpret the author's words and ultimately transfer the script from page to stage (Mroczka, 2013:1). Script analysis consists of two sets of action. Firstly, the general overall reading of the script takes place to understand the content and theme of the play. Secondly, the detailed script analysis, according to the theory and methods suggested by Thomas (2009), will be applied. The researcher uses the theory of Kiely (2016) as an introduction to the general theme, content and action in every play followed by the detailed script analysis techniques of Thomas (2009) of each play under the sections dedicated to the three plays respectively.

According to Kiely (2016:137), the first steps in understanding a text is to read the script at least three times. The first reading must be an exact, word-for-word read-through of the

entire text. The second and third readings will be more in-depth, and the researcher will analyse the texts by following the five steps proposed by Twijnstra and Durden (2014).

Twijnstra and Durden (2014:80-82) provide five steps to be followed to break down the script:

1. Identify the protagonist. The protagonist is the hero who is in trouble and ends up in a crisis.
2. Identify the antagonist and tritagonists. The antagonist is the character who leads the hero even deeper into trouble, and there can be more than one antagonist. The tritagonist either helps the antagonist or protects the protagonist.
3. Identify where in the script, the conflict starts, develops, and where the climax occurs.
4. Identify the crisis in the script where the protagonist's conflict is at its highest.
5. Identify the full dramatic structure, namely the exposition, the inciting incident in the drama, the lowest point, the crisis, the peripety and the resolution.

According to Twijnstra and Durden (2014:64), the basics of any theatre production are conflict and drama, thus serving as a source from which theatre comes to life, be it comedy, tragedy, a musical, and so forth. Aristotle explains that we are attracted to conflict because we gain pleasure from watching it and feel empathy for the hero (*ibid*). Aristotle adds that heightened emotions create a 'catharsis' that purifies our emotions when experiencing fear and pity (*ibid*).

In the next sections, the detailed analysis techniques of Thomas (2009) will also be followed.

4.3 NOISES OFF (2001)

Background: *Noises off* (2001) is a comedic play written by Michael Frayn, who wrote it with the basic idea that the dramatic action backstage could be more fun or fascinating for an audience to watch than the action on stage.

The play begins during the final dress rehearsal late at night for the regional tour of the new British farce, *Nothing On*. The tension between actors and the stage director is running high. The main concern of director, Lloyd Dallas, is that his leading actor, Dotty, is suddenly forgetting all her lines and blocking. As the rehearsal goes on, we find out more about the relationships between the actors, which eventually leads to tears, arguments, sickness and a nose bleeding before they even reach the end of their run-through of Act 1.

Set a month later, the play *Nothing On* is now up and running in Act 2 and the cast is about to perform a matinee show. In this Act, the action takes place backstage where we find even more love affairs, fights, and tears (etc.) than we did in Act 1. Actress Brooke makes threats of leaving, props are misplaced, pranks are played, and the performance is a mess. We end this Act with Poppy revealing to Lloyd that she is pregnant.

Nothing On is now ending its tour and is about to be performed at the Municipal Theatre in Act 3. This is when the fun begins to happen, and they cannot get the play going on time. When the play begins, and lines are lost, blocking is confused, and Act 3 becomes a horrible mess. Towards the end, however, under the direction of Lloyd, the cast manages to carry the play towards a sort of happy conclusion.

The major issues of the play include:

- Betrayal among the actors.
- Alcohol abuse among the actors.
- Jealousy among the actors.

4.3.1 Script analysis of *Noises off* (2001)

To understand this play better, a detailed script analysis according to the theory of Thomas (2009) is undertaken. To outline all the important details of *Noises off*, the researcher will focus on action analysis, the given circumstances, external action and the structure of the play.

Action analysis – Action analysis focuses on the plot and the events happening on stage (Thomas, 2009:1).

Type of action – The type of action refers to the genre of the play (Thomas, 2009:295). *Noises off* is a light farce and are more commonly known as a bedroom farce that centres around sexual pairings and recombination of characters as they move through improbable plots, daring physical acts, misunderstandings and with a lot of slamming doors.¹

Protagonist – The protagonist is the hero of the play, and in *Noises off* the protagonist is Lloyd, the director.

¹ Bedroom farce - <http://dictionary.sensagent.com/bedroom%20farce/en-en/>

Antagonist – The antagonist is someone who gets the main character in trouble, and in *Noises off*, the two antagonists are Poppy and Brooke.

Tritagonist – The tritagonist is either the antagonist's helpers or the protagonist's protectors. In *Noises off* the tritagonists are the rest of the cast switching between helper and protector.

Three major climaxes – The three major climaxes help to give the sense that the action on stage is moving forward (Thomas, 2009:14). With *Noises off*, we can look at the three major climaxes as the climax of each Act:

1. Lloyd yells at Brooke, and we find out that Lloyd has been dating both Brooke and Poppy in Act 1.
2. Poppy tells Lloyd that she is pregnant in Act 2.
3. Garry falls down the stairs after tripping over the box and bag in Act 3.

Theme – The theme is the unifying idea that ties the whole play together (Thomas, 2009:20). The theme of *Noises off* is the interference of real life on an actor's performance abilities.

Given circumstances – Given circumstances are the specific environments the play occurs in (Thomas, 2009:39).

Time of composition – *Noises off* was initially written as a short one-act play entitled *Exits*. From 1977 to 1982, the play was reworked into a three-act text entitled, *Noises off*, and the production was first performed in 1982 at the Lyric in Hammersmith (Frayn, 2001).

Time of action – The action in *Noises off* takes place at different times and places. The first Act takes place in the evening as a rehearsal for the show *Nothing On*. The second Act takes place in the afternoon as the play is performed as a matinee. The third Act takes place in the evening as a performance of the play, *Nothing on*. The play within the play, *Nothing on*, takes place on a Wednesday afternoon in the summer.

Dramatic time – The onstage action takes place over two hours, excluding the intervals between the acts.

Place – An open plan living room with a staircase leading to a gallery. There are several entrances and exits provided. On the ground floor, there is a door leading to the garden; another leading to the study; a third door leads to the servant quarters, and the fourth door leads to the downstairs bathroom. A full-length south-facing window sits between the front

door and the study. Upstairs is the master bedroom along with another door leading to a small linen cupboard. The hallway upstairs leads to the attic, and halfway up the stairs is another well-equipped bathroom.

General locale – The general location remained the same during all three acts in *Noises off*.

ACT 1: The living room of Brent's country home. Wednesday afternoon.

(*Grand Theatre, Weston-Super-Mare. Monday, January 14*)

ACT 1 (2): The living room of Brent's country home. Wednesday afternoon.

(*Theatre Royal, Ashton-under-Lyne. Wednesday matinee, February 13*)

ACT 1 (3): The living room of Brent's country home. Wednesday afternoon.

(*Municipal Theatre, Stockton-On-Tees. Saturday, April 6*)

Specific locale – The specific site of the play refers to the particular location in which the action of the play takes place (Thomas, 2009:47). *Noises off* take place in three locations, namely:

- Act 1 – The action takes place in the living room of the Brent's country home.
- Act 2 (1) – The action takes place backstage during the performance.
- Act 3 (1) – The action takes place in the living room of the Brent's country home.

External actions – External actions can be described as the physical action of the characters on stage (Thomas, 2009:94). The researcher will discuss two aspects of external action, namely: entrances and exits, and special activities.

Entrances and exits – Stage action always start with an entrance and ends with an exit, and in *Noises off* there are many entrances and exits. The play revolves around doors and sardines. As one actor enters, another one exits-adding to the many comedic miscommunications or misinterpretations happening in the play.

Special activities – Special activities are stage actions that require extra rehearsals, for instance, dance or stage combat. In *Noises off*, the actors are required to run up and down the stairs and even fall down the stairs.

Structure – Structure refers to the structural arrangement of action in the play (Twiijnstra and Durden, 2014:82).

Primary event – Dotty (Mrs. Clackett) messes up her line for the first time in the first Act of the play within the play.

Inciting action – Lloyd has to interrupt Dotty to correct her words and movements.

Conflicts – Garry believes that Dotty and Frederic are having an affair; at the same time, Lloyd is seeing both Brooke and Poppy romantically.

Climax – In Act Three, the actors start to mess up their lines and ad-lib in front of their live audience, as the actor's personal issues and stress become too much.

Resolution – *Noises off* ends with the suggestion that Lloyd is either marrying Brooke or Poppy.

4.3.2 *Noises off* (2001) director's script breakdown

The director's breakdown is used as a means of breaking up the play with specific notes on the scenes, décor, props, and so forth (Kiely, 2016:149). For this study, the researcher makes use of a summary of the scenes and the potential safety hazards that can be present in *Noises off*.

TABLE 4.1: DIRECTOR'S SCRIPT BREAKDOWN OF *NOISES OFF*

ACT 1				
Sc.	Page	Characters	Summary	Potential safety hazards
1.1	1-10	Dotty Garry Lloyd Brooke	Dotty has trouble remembering the blocking regarding the sardines and the newspaper	No SH
1.2	10-15	Dotty Garry Brooke	Garry and Brooke arrive at the house for a romantic afternoon.	No SH
1.3	15-21	Dotty Garry Lloyd Brooke Poppy	Dotty forgets the sardines again, and Garry suggests they change the sardines to something else.	No SH

1.4	21-37	Dotty Garry Lloyd Brooke Poppy Frederic Belinda Tim Selsdon	The bedroom door will not open, and the front door will not close.	No SH
1.5	37-46	Dotty Garry Lloyd Brooke Frederic Belinda Selsdon	Frederic and Belinda return for a romantic getaway.	No SH
1.6	46-53	Dotty Garry Brooke Frederic Belinda	Garry wonders if there is anything supernatural in the house. Frederic is worried about the taxes.	Garry is running up the stairs, page 52. Brooke is rushing out of the linen cupboard, page 52.
1.7	53-59	Dotty Garry Lloyd Brooke Poppy Frederic Belinda Selsdon	Brooke loses her left contact lens	Brooke head buds Poppy and steps backwards onto Garry's hand, page 55.
1.8	59-66	Garry Lloyd Brooke Frederic Belinda	Garry and Brooke freak out about the missing sardines and Brooke's missing files.	Brooke runs downstairs, page 62.
1.9	66-71	Lloyd Poppy Frederic Belinda Selsdon	Selsdon is late on cue.	No SH
1.10	71-86	Dotty Garry Brooke Frederic Selsdon	Garry searches for Brooke while Selsdon robs the place. Frederic struggles with the sardines and tax	Frederic runs with his trousers around his ankles, page 78. Brooke runs downstairs, page 81.

			demand stuck to his hands.	Frederic jumps up the stairs with his trousers around his ankles, page 87.
1.11	86-90	Dotty Garry Brooke Frederic Belinda Tim Selsdon	Frederic is mistaken for the Sheikh by Garry.	No SH
1.12	90-101	Dotty Garry Lloyd Brooke Poppy Frederic Belinda Tim Selsdon	The explanation of why the Sheikh and Phillip (Frederic) looks the same. Lloyd's relationship with both Poppy and Brooke becomes known.	No SH
ACT 2				
Sc.	Page	Characters	Summary	Potential safety hazards
2.1	1-14	Lloyd Poppy Frederic Belinda Tim	Poppy and Tim are worried about Dotty and Garry who may not be going on stage, because of a fight.	No SH
2.2	14-27	Dotty Garry Lloyd Brooke Poppy Frederic Belinda Tim Selsdon	Everyone is concerned about Garry and Dotty who are not speaking to each other.	No SH
2.3	27-34	Dotty Garry Lloyd Brooke Poppy Frederic Belinda Tim Selsdon	Garry and Frederic fight because Garry believes Dotty and Frederic are having an affair.	No SH

2.4	35-43	Dotty Garry Brooke Frederic Belinda Tim Selsdon	Selsdon tries to get the whiskey while Dotty and Garry fight. Belinda runs around trying to keep Selsdon from getting into the whiskey.	No SH
2.5	43-52	Dotty Garry Lloyd Brooke Poppy Frederic Belinda Tim Selsdon	Belinda takes an axe to get Selsdon out of the bathroom. Then Garry takes the axe threatening to use it on Frederic. Poppy has to read Brooke's lines because Brooke is in the dressing room.	The snatching of the axe between Garry, Dotty, Frederic and Belinda, page 46.
2.6	53-68	Dotty Garry Lloyd Brooke Poppy Frederic Belinda Tim Selsdon	Selsdon is late on cue and forgets his lines. Garry dumps a plate of sardines on Dotty's head. Dotty ties Garry's shoelaces together.	Dotty ties Garry's shoelaces together and then Garry falls as he is making his entrance upstairs, page 61. Brooke loses her contact lens; Lloyd, Belinda and Dotty guide her to the window. Brooke bumps her head against the set and then falls over the sofa, page 65. Garry jumps down the stairs, shoes still tied, page 65.
2.7	68-75	Dotty Garry Lloyd Brooke Poppy Frederic Belinda Tim Selsdon	Garry pokes Lloyd in the behind with a cactus. Poppy tells Lloyd that she is pregnant with his child.	No SH
ACT 3				
Sc.	Page	Characters	Summary	Potential safety hazards
3.1	1-3	Dotty Poppy Belinda Tim	Tim is on stage apologising for the delay while Dotty and Belinda fight over Frederic.	No SH

3.2	3-15	Dotty Garry Brooke	Dotty enters limping painfully. Garry and Brooke arrive at the house for a romantic afternoon.	No SH
3.3	15-21	Dotty Garry Frederic Belinda	Frederic and Belinda return for a romantic getaway. Dotty is not happy about the sardines on the sofa and later stuffs the sardines down Belinda's dress.	Garry runs up the stairs with the bag and box, page 16.
3.4	21-25	Dotty Garry Brooke Frederic Belinda Tim	Garry wonders if there is anything supernatural in the house.	Garry falls over Frederic's bag and box, page 22.
3.5	25-37	Dotty Garry Brooke Frederic Belinda Tim	Garry and Brooke freak out about the "missing" sardines and Brooke's "missing" files. Everything is chaos.	Garry falls over the bag and box at the top of the stairs, 37.
3.6	38-40	Dotty Garry Brooke Frederic Belinda	All the cast members are on stage, all wondering what is going on.	No SH
3.7	40-45	Dotty Garry Lloyd Brooke Poppy Frederic Belinda Tim Selsdon	Tim, Lloyd and Selsdon all dressed as the burglar is on stage and at this point, no one is sure what to do next. Belinda leads the entire ordeal.	No SH

4.3.3 *Noises off* (2001) safety hazard analysis

Noises off has a lot of action happening on stage, and thus, a few possible safety hazards must be addressed. Below is a list of all the possible safety hazards regarding the set and the actors' movements.

Set design – For *Noises off*, the set design must be sturdy because of the action taking place, and space must be provided for the actors to complete their special activities. In *Noises off*, the actors are required to run into the bannister, fall down the stairs, jump up the stairs and perform a lot of entrances and exits through many doors. The railings must be very sturdy and made from strong wood, while the stairs must be broad enough and slightly curved to ensure that the actors can perform their movements properly and safely. The doors must also be of good sturdy quality to withstand the amount of pulling and slamming done by the actors. In addition, the set must be built onto a revolving stage as the show takes place in the front- and backstage area. The technical director must make sure that the set is adequately fastened onto the revolve to avoid the set from falling over when the revolve moves.

Actor's movements – When ensuring safety during a performance, rehearsal is key. Many injuries from hazards can be avoided by arranging extra rehearsal time to practise movements. In *Noises off*, the risk of injury is very high because of all the actions the characters need to perform, such as running up and down the stairs, jumping over boxes or even falling down the stairs. Below is a list of possible safety hazards that can occur in the actor's movement.

Act 1

- Garry is running up the stairs p.52.
- Brooke is rushing out of the linen cupboard into the bannister, page 52.
- Brooke head buds Poppy and steps backwards onto Garry's hand, page 55.
- Brooke runs downstairs in heels, page 62.
- Frederic runs with his trousers around his ankles, page 78.
- Brooke runs downstairs in heels, page 81.
- Frederic jumps up the stairs with his trousers around his ankles, page 87.

Act 2

- The snatching of the axe between Garry, Dotty, Frederic and Belinda, page 46.

- Dotty ties Garry's shoelaces together and then Garry falls as he is making his entrance upstairs, page 61.
- Brooke loses her contact lens; Lloyd, Belinda and Dotty guide her to the window. Brooke bumps her head against the set and then falls over the sofa, page 65.
- Garry jumps down the stairs, shoelaces still tied, page 65.

Act 3

- Garry runs up the stairs with the bag and box, page 16.
- Garry falls over Frederic's bag and box, page 22.
- Garry falls over the bag and box at the top of the stairs and then falls down the stairs, page 37.

In summary, the key to a safe production of *Noise off* is the design and building of a sturdy set and steps, markings with masking tape on edges of steps and enough light backstage for actors to see where steps, doorframes and edges on stage, are. Ample time during the rehearsal process must be set aside to refine and practice these dangerous physical actions by the actors. Dangerous physical actions should be choreographed and rehearsed, starting the action from slow motion and speeding up the action later during rehearsals and repeated before every performance. Actors must stick to the same actions in their execution of these dangerous acts to safeguard not only themselves but also their fellow actors. Any unpredicted improvisational actions can cause disaster and injury.

4.4 **MACBETH (1606)**

Background: *Macbeth* was written by William Shakespeare in 1606 and is one of Shakespeare's most famous tragedies. This tragedy follows the story of one man's ambition and desire for power that ultimately destroys him.

After a battle, Macbeth and Banquo encounter some witches along the road, and the three witches predict that he will be the king someday. After telling his wife of the witches' prophecies, they plot to murder the king who will be staying with them for a night. After dinner, when everyone is asleep, they murder the king, Duncan, and frame the guards. Macbeth becomes king, and with his reign comes his self-destruction. Macbeth starts silencing anyone who might threaten his reign.

After a visit to the witches, and seeing three apparitions, Macbeth has Banquo killed and starts seeing his ghost. Lady Macbeth is no better; she starts sleepwalking, muttering about

not getting the blood off her hands. Macbeth and Lady Macbeth both end up in a downward spiral. Lady Macbeth kills herself and Macbeth is killed by his arrogance. Macduff easily dispatches Macbeth because the witches mislead Macbeth. In the end, Malcolm, Duncan's son, becomes king.

The major issues of the play include:

- Ambition.
- Guilt.
- Power corruption.

4.4.1 Script analysis of *Macbeth* (1606)

The researcher focuses on the action analysis of the play, the given circumstances, external action of characters and the plot as well as the structure of *Macbeth*. The analysis of the script will bring a better understanding of the script and support the later identification of possible safety hazards in the play.

Action analysis – The action analysis of *Macbeth* is as follows:

Type of action – *Macbeth* is one of Shakespeare's most famous tragedies that, true to the nature of a classic tragedy, deals with tragic events and having an unhappy ending, especially one concerning the downfall of the main character, in this case, Macbeth.

Three major climaxes – The three major climaxes shows the progression of the play. In *Macbeth*, the three major climaxes are:

1. Macbeth and Banquo meet the witches on the road after the battle in Act 1.
2. Macbeth and Lady Macbeth murder King Duncan in his sleep and frame the guards in Act 2.
3. Macbeth duels with Macduff and is ultimately killed by Macduff in Act 5.

As in a classic tragedy, the characterisation in the play is complex. Prodded by his ambitious wife, Lady Macbeth, Macbeth as the protagonist, murders King Duncan, becomes king and sends mercenaries to kill Banquo and his sons. His attempts to defy the prophecy fails, however, as Macduff kills Macbeth and Duncan's son Malcolm becomes king.

Protagonist – Macbeth is the protagonist, the tragic hero.

Antagonist – The antagonists in *Macbeth* are the three witches and Lady Macbeth.

Tritagonist – In *Macbeth*, the tritagonists are the rest of the cast switching between helper and protector, with Banquo, in particular, starting as a protector but then working against Macbeth, as his ghost haunts the protagonist.

Theme – The corrupting nature of unchecked ambition is the theme that runs through *Macbeth* driving his every decision.

Given circumstances – All plays have a combination of present and past that make up the given circumstances (Thomas, 2009:39).

Time of composition – *Macbeth* was written in 1606 in England.

Time of action in the play – *Macbeth* is set in the 1600s when kings were the symbol of order.

Dramatic time – The onstage action is roughly an hour and a half, depending on the specific production.

Place – *Macbeth* takes place in Scotland, near Burnham woods.

General locale – In *Macbeth*, the play is set in a castle, cave or a battlefield. Although there are many locations indicated in the play, the Shakespearian dramas generally make use of verbal reference by characters and minimalistic sets are required for productions. This means that the actors describe the location, and only a few useful props or décor pieces are used to indicate where the action takes place.

External actions – The researcher will discuss two aspects of external action, namely: the use of props and special activities like stage combat scenes.

Use of props – In *Macbeth*, the props that are used are mostly torches for night scenes, swords and daggers, used predominantly towards the end of the play. As stated in the previous chapter (cf 3.14.2) any swords, knives or blades must have blunt edges in order not to harm anyone. The torches do not have real flames but are just flickering light bulbs shaped like medieval torches (ChocoJon, n.d.:3).

Special activities – The special activities in *Macbeth* that require extra rehearsal time are the stage combat that takes place towards the end of the play.

Structure – The arrangement of *Macbeth* is as follows:

Primary event – The action starts with the three witches asking when they shall meet again and establishing their "appointment" with Macbeth.

Inciting action – Macbeth and Banquo's encounter with the witches as well as Lady Macbeth's speeches goading Macbeth into murdering Duncan and seizing the crown.

Conflicts – The struggle within Macbeth between his ambition and his sense of right and wrong; the struggle between the murderous evil represented by Macbeth and Lady Macbeth and the best interests of the nation, represented by Malcolm and Macduff.

Climaxes – Macbeth's murder of Duncan in Act 2 represents the point of no return, after which Macbeth is forced to continue butchering his subjects to avoid the consequences of his crime.

Resolution – Macbeth's final confrontation with Macduff and the opposing armies, where Macduff kills Macbeth.

4.4.2 *Macbeth* (1606) director's script breakdown

For this study, the researcher makes use of a summary of the scenes and the potential safety hazards that can be present in *Macbeth* to break down the play.

TABLE 4.2: DIRECTOR'S SCRIPT BREAKDOWN OF *MACBETH*

ACT 1				
Sc.	Page	Characters	Summary	Potential safety hazards
1.1	3	Witch 1,2 and 3	The three witches speak in rhyme, giving the audience a glimpse of what is to come.	Fire under cauldron
1.2	5-9	Duncan Malcolm Captain	Duncan and the captain discuss	No SH

		Lennox Ross Angus Donalbain Attendants	Macbeth's bravery on the battlefield.	
1.3	9-21	Witch 1, 2 and 3 Macbeth Banquo Ross Angus	The witches' prophesy that Macbeth will become the Thane of Cawdor and then the king	Fire under cauldron
1.4	21-25	Duncan Malcolm Donalbain Lennox Attendants Macbeth Banquo Ross Angus	Duncan praises Macbeth for his good deeds, and Macbeth invites Duncan for a feast.	No SH
1.5	25-29	Lady Macbeth Attendant Macbeth	Lady Macbeth begins plotting Duncan's murder.	Night scene – torches are used
1.6	29-31	Duncan Banquo Lady Macbeth Malcolm Donalbain Banquo Lennox Macduff Ross Angus Attendants	Duncan and his party arrive at Macbeth's home.	Night scene – torches are used
1.7	31-35	Macbeth Lady Macbeth	Macbeth debates whether he should or should not kill Duncan to get the throne.	No SH
ACT 2				
Sc.	Page	Characters	Summary	Potential safety hazards
2.1	37-41	Banquo Fleance Macbeth	Macbeth hallucinates seeing a dagger floating before him.	Night scene – torches are used

		Servant		
2.2	41-45	Lady Macbeth Macbeth	Macbeth killed Duncan in his sleep.	Night scene – torches are used
2.3	47-57	Porter Macduff Lennox Macbeth Lady Macbeth Banquo Donalbain Malcolm	Macduff discovers that Duncan has been murdered and wakes the whole castle.	Night scene – torches are used
2.4	57-61	Old man Ross Macduff	Malcolm and Donalbain fleeing puts the suspicion on them, while Macbeth becomes king.	Night scene – torches are used
ACT 3				
Sc.	Page	Characters	Summary	Potential safety hazards
3.1	61-69	Banquo Macbeth Lady Macbeth Lennox Ross Lords Attendants Servant Two murderers	Macbeth sends two murderers after Banquo because he fears Banquo will figure out that he killed Duncan to get the throne.	Night scene – torches are used
3.2	69-73	Lady Macbeth Servant Macbeth	Macbeth and Lady Macbeth hosts a feast knowing that Banquo will not be alive for long.	Night scene – torches are used
3.3	75-77	Murderer 1,2, 3 Banquo Fleance	Three murderers kill Banquo.	Night scene – torches are used
3.4	77-87	Macbeth Lords Lady Macbeth Ross Lennox Attendants Murderer 1 Banquo ghost	Macbeth hosts a feast, and suddenly Banquo's ghost appears.	Night scene – torches are used

3.5	89	Witch 1 Hecate	The witches meet with Hecate and discuss the next step to be taken with Macbeth.	No SH
3.6	91-93	Lennox Lord	Lennox suspects Macbeth and plans to march against him.	No SH
ACT 4				
Sc.	Page	Characters	Summary	Potential safety hazards
4.1	93-103	Witch 1, 2 and 3 Hecate Macbeth Apparition 1, 2, 3 Lennox	The witches perform a spell and show Macbeth 3 apparitions about his future.	No SH
4.2	105-111	Lady Macduff Macduff's son Ross Messenger Murderer 1, 2, 3	Macduff has fled, leaving his wife and son. The murderers kill Lady Macduff and her son.	Night scene – torches are used The dagger used to kill Macduff's family, page 111.
4.3	111-125	Malcolm Macduff Doctor Ross	Macduff has learnt of his family's murder and wants revenge.	No SH
ACT 5				
Sc.	Page	Characters	Summary	Potential safety hazards
5.1	127-131	Doctor Gentlewoman Lady Macbeth	The doctor and a servant watch Lady Macbeth sleepwalking.	Night scene – torches are used
5.2	131-133	Menteith Agnus Caithness Lennox Soldiers	The men talk about the army marching against Macbeth.	No SH
5.3	133-137	Macbeth Servant Doctor Attendants Seton	Macbeth is worried about the army rising against him. Macbeth no longer cares	No SH

			about those around him.	
5.4	137-139	Malcolm Siward Macduff Siward's son Menteith Caithness Angus Lennox Ross Soldiers	Malcolm and his army are ready to attack.	No SH
5.5	139-143	Macbeth Seton Soldiers Messenger	Macbeth thought he was safe in the castle, but the Burnham woods began to move towards the castle.	No SH
5.6	143	Malcolm Siward Macduff Army	Malcolm and Macduff sound the trumpets of war.	No SH
5.7	143-145	Macbeth Young Siward Macduff Malcolm Old Siward	Macbeth kills Young Siward. The army has arrived at the gate.	Stage combat between Macbeth and young Siward, page 145.
5.8	147-149	Macbeth Macduff	Macbeth and Macduff fight. Macduff kills Macbeth.	Stage combat between Macbeth and Macduff, page 147.
5.9	149-151	Malcolm Siward Ross Thanes Soldiers	Macbeth is dead, and Malcolm is king.	No SH

4.4.3 *Macbeth* (1606) safety hazard analysis

Macbeth is a play with few safety hazards. The only real action occurs near the end of the play during the war between Macbeth and the resistance. Some of the hazards that may occur include:

Stage combat – Stage combat needs a lot of rehearsal and precision to ensure everyone's safety. In *Macbeth*, the combat occurs near the end of the play, and there are only two occurrences:

- Macbeth and young Siward duels and Macbeth kill young Siward, page 145.
- Macbeth and Macduff duels and Macduff beheads Macbeth, page 147.

The use of props – The dangerous props used in *Macbeth* are straightforward. Fire torches, swords and daggers are used in the play:

Act 1

- Fire under the cauldron, page 1.
- Night scene – torches are used.

Act 4

- Night scene – torches are used.
- The dagger the murderers use to kill Macduff's family, page 111.

Act 5

- Night scene – torches are used.
- The swords of Macbeth and young Siward, page 145.
- The swords of Macbeth and Macduff, page 147.

As shown above, choreography will be needed to ensure that the stage combat scenes are rehearsed to perfection to avoid any injuries. This choreography may be established using slow motion and then gradually sped up until all the actors are comfortable with the choreography. The props will form part of the choreography as the actors will need to learn to use knives, swords and torches in the play.

4.5 DOGG'S HAMLET (1979)

Background: *Dogg's Hamlet* is a one-act comedy written by Tom Stoppard in 1979. The short, one-act play was written together with another one-act play about *Macbeth*; together they make up, *Dogg's Hamlet, Cahoots' Macbeth*.

In *Dogg's Hamlet, Cahoot's Macbeth*, Tom Stoppard cheekily satirises the theatre and political oppression. Inspired by Wittgenstein and his fellow Czech playwright Pavel Kohout, Stoppard as he did in his monumental *Rosencrantz and Guildenstern Are Dead*, ingeniously

appropriates Shakespeare for his ingenious purposes again. The conceit is that the characters speak in the invented language of "Dogg", which is characterised by the nonsensical usage of English words. Artichoke and scab are among those that get a lot of mileage (Reilly, 2019:1-2).

Dogg's Hamlet starts with a couple of students throwing a football across the stage. Their English is very strange and can be seen as a language all on its own. Later the headmaster comes in, getting the students started on building the set for their production of *Hamlet*, which is a 15-minute version of the entire play with a lot of scene changes; entrances and exits. While performing *Hamlet*, Shakespearean English is used, and the audience does not need to decipher the dialogue.

The major issues of the play include:

- The language barrier.
- Madness.
- Political satire.

4.5.1 Script analysis of *Dogg's Hamlet* (1979)

To better understand *Dogg's Hamlet's* text, the researcher will do an action analysis; look at the given circumstances, external action and the structure of the text.

Action analysis – The action analysis of *Dogg's Hamlet* is as follows:

Type of action – *Dogg's Hamlet* is a satirical comedy with a little bit of slapstick thrown in.

Three major climaxes – The three major climaxes of *Dogg's Hamlet* are:

1. The building of the set by Easy, Abel, Baker and Charlie.
2. The start of the school's production of *Hamlet* after the prize-giving function.
3. Hamlet kills Polonius, sealing his fate.

Protagonist – Hamlet is the protagonist in *Dogg's Hamlet*.

Antagonist – In *Dogg's Hamlet*, Claudius and Hamlet's father's ghost are the antagonists.

Tritagonist – In *Dogg's Hamlet*, the tritagonists are the rest of the cast switching between helper and protector.

Theme – *Dogg's Hamlet's* central theme is communication because of how Stoppard uses language to indicate how language can confuse when it is different.

Given circumstances – The following given circumstances help form *Dogg's Hamlet*:

Time of composition – *Dogg's Hamlet* was written by Tom Stoppard in 1979.

Time of action – *Dogg's Hamlet* takes place in the present time.

Dramatic time – Since *Dogg's Hamlet* is a short, one-act play, the onstage time is almost an hour.

Place – *Dogg's Hamlet* takes place at a school as part of the school performance of *Hamlet*.

General locale – *Dogg's Hamlet*, like all other Shakespeare plays, jump around from place to place. One scene is in the castle, the next the garden or the graveyard.

External actions – The researcher will discuss two aspects of external action, namely: entrances and exits, and special activities.

Entrances and exits – *Dogg's Hamlet* have many entrances and exits; especially when it comes to the performance of *Hamlet*, there are many scene changes with quick entrances and exits.

Special activities – The special activities in *Dogg's Hamlet* are somewhat similar to *Macbeth* concerning the stage combat. Another special activity that will require extra rehearsal time is the throwing of the football at the beginning of the play and the throwing of the building material during the performance.

Structure – The arrangement of *Dogg's Hamlet* is as follows:

Primary event – The boys are playing ball, and Abel struggles with the microphone.

Inciting action – Abel and Baker start rehearsing their lines for the school play.

Conflicts – The broken communication between Easy and the rest results in misunderstandings.

Climaxes – The killing of Polonius sets Hamlet on his destructive path that will lead to his death.

Resolution – A 2-minute run-through of Hamlet is given to sum-up everything.

4.5.2 *Dogg's Hamlet* (1979) director's script breakdown

For this study, the researcher makes use of a summary of the scenes to break down the play and to identify the potential safety hazards that can be present in *Dogg's Hamlet*.

TABLE 4.3: DIRECTOR'S SCRIPT BREAKDOWN OF *DOGG'S HAMLET*

ACT 1				
Sc.	Page	Characters	Summary	Potential safety hazards
1	1-4	Baker Abel Charlie Dogg	Baker and Abel are throwing a football. Then Abel struggles with the microphone.	Baker and Abel are throwing a football to each other, page 1.
2	4-5	Abel Baker Charlie	Abel and Baker practise their lines for the school play.	No SH
3	5-14	Baker Abel Charlie Easy	The lorry arrives with boxes, and the boys help unload it.	The building material being thrown around on stage, page 7-8.
4	14-17	Lady Dogg Abel Baker Charlie Easy Mrs Dogg Fox	The prize-giving function begins.	No SH
5	17-18	Shakespeare	The prologue to Hamlet is given.	No SH
6	18	Bernardo Francisco	The guards on the tower see the ghost of the dead king.	No SH

7	19	Claudius Hamlet Horatio Gertrude	Hamlet is informed of his father's ghost appearing on the tower platform.	No SH
8	19-20	Horatio Hamlet Ghost	The ghost informs Hamlet of his murder.	No SH
9	20-21	Polonius Ophelia Hamlet Claudius	Hamlet has arranged a play to take place in the castle to trick his uncle.	No SH
10	21-22	Hamlet Ophelia Marcellus Horatio Claudius Gertrude	Everyone watches the puppets perform the murder of the king.	No SH
11	22	Polonius Hamlet Gertrude	Hamlet kills Polonius for eavesdropping on his conversation with his mother.	Hamlet killing Polonius, page 22.
12	23	Claudius Hamlet	Claudius sends Hamlet to England where he will be assassinated.	No SH
13	23	Hamlet	Hamlet is at sea, and he is seasick.	No SH
14	23-24	Laertes Claudius Ophelia	Ophelia has gone mad.	No SH
15	24-25	Hamlet Gravedigger Laertes Claudius Gertrude	Hamlet finds out that Ophelia is dead.	No SH
16	25-26	Hamlet Laertes Claudius Gertrude Osric Horatio	Hamlet and Laertes duels. Gertrude drinks the poisoned drink and dies. Laertes is killed. Hamlet kills Claudius.	Hamlet and Laertes duels, page 25.

		Fortinbras	Hamlet also dies.	
17	26-28	Claudius Hamlet Horatio Ghost Polonius Gertrude Laertes Osric Ophelia Marcellus Gravedigger Easy	A quick recap of Hamlet is given	Hamlet stabs Polonius, page 28. Laertes and Hamlet duels, page 28.

4.5.3 *Dogg's Hamlet (1979) safety hazard analysis*

In *Dogg's Hamlet*, the safety hazards are somewhat different and will require extra rehearsal time to get the timing and coordination right.

Actor's movements – The actor's movements will require extra practice because a certain rhythm must be followed to ensure everything runs smoothly. These types of movements include:

- Baker and Abel are throwing a football to each other, page 1.
- The building material being thrown on stage, page 7-8.

The use of props – The handling of the props will require practice and precision because one false move can be dangerous to everyone involved. These types of prop handling include:

- The boys are throwing the football across the stage, page 1.
- The boys are throwing the building material to build the set, page 7-8.
- Hamlet kills Polonius, page 22.
- Hamlet and Laertes duels to the death, page 25.
- Hamlet stabs Polonius in the 2-minute run through, page 28.
- Laertes and Hamlet duels to the death in the 2-minute run through, page 28.

In brief, many physical activities are happening onstage. The game the actors play in the beginning is easy to rehearse and just requires concentration. The stage combat, as with *Macbeth*, should also be rehearsed and perfected, first in slow motion and then sped up.

The props, as with *Macbeth*, must be stage ready (blunt edges) to avoid injuring other cast members.

4.6 CHAPTER 4 CONCLUSION

Based on the literature study regarding the potential safety hazards found in the theatre, the researcher analysed *Noises Off*, *Macbeth* and *Dogg's Hamlet* to identify the possible safety hazards the text of the three plays may present. These safety hazards were listed and discussed.

In the next chapter, entitled **Visual deduction of the performances**, a study of the performances of the three plays to determine how the hazards found in the texts were creatively solved by the designers, the directors and choreographers.

CHAPTER 5

VISUAL DEDUCTION OF THE PERFORMANCES

5.1 INTRODUCTION

Previously, in Chapter 4: **Script analysis and discussion**, the texts of *Noises off* (2001), *Macbeth* (1606) and *Dogg's Hamlet* (1979) were analysed. During this analysis, a list of potential safety hazards (SH's) was compiled that could occur as recognised in the texts. The text analysis forms the basis for the visual deduction of the performances of the three chosen plays.

In this chapter, an in-depth analysis of the visual material of the productions by analysing, through visual deduction, videos and photos of *Noises off* (2001), *Macbeth* (1606) and *Dogg's Hamlet* (1979) is conducted. The aim is to compare the possible safety hazards as identified in Chapter 4 in the texts and determine how these hazards were creatively solved during the performances. The potential hazards created by blocking that was not identifiable or prescribed in the didascalia in the texts, but created by the directors and actors will also be looked into.

5.2 VISUAL ANALYSIS TECHNIQUE

A similar technique for the visual deduction as for the script analysis is followed. First, the researcher watched the productions and performances of the three chosen plays on the videos to get an initial impression of each production. After the initial viewing, the performances were viewed again with the written text alongside, to establish what each director changed in terms of the texts in the final staged productions. With these changes noted, the videos of the performances were watched for the third time. During this viewing, the focus was on the identified hazards in the text as well as some potential hazards that were not present in the text but presented itself in the performance. The text was then analysed on how the potential hazards in the texts were creatively solved during the performances to ensure safe and smooth performances of each play. Comments will be made on new SH's in the productions itself and how it was solved by the designers, directors, choreographers and actors. Reference to the video clips from all three performances will provide visual information and demonstrate how the dangers were overcome. Dangerous movements, such as stage fights, can be viewed to

demonstrate how the director, choreographer and actors overcame the possible dangers.

5.3 **NOISES OFF (2018)**

Noises off (2001) by Michael Frayn, was performed at the UFS Wynand Mouton Theatre in Bloemfontein in 2018 by the Drama and Theatre Arts Department third-year students under the direction of Thys Heydenrych. This theatre has a normal, proscenium stage. A revolving platform was installed on stage to allow for the turning of the set to show the front and backstage areas of the set.

The text of *Noises off* was adapted for the stage production to make the show more relevant for a South African audience. Some sections of the dialogue were changed into Afrikaans and Sesotho to appeal to a South African audience.

Some examples are indicated below.

The original text (Frayn, 2001: 29-30)

Belinda (to Brooke): Don't you cry, my sweet! It's not your fault!
Brooke: No, I've got something behind my lens.
Frederic: Yes, you couldn't expect Brooke to keep anyone in sight.
Dotty (pointing at Selsdon without seeing him): But he was standing right there in the stalls before we started! I saw him!
Brooke: Who are we talking about now?
Belinda: It's all right, my sweet. We know you can't see anything.
Brooke: You mean Selsdon? I'm not blind. I can see Selsdon.

The adapted text (Heydenrych, 2018)¹

Belinda: Agnee hartjie, moet nie jousef blameer nie.
Brooke: Askies?
Belinda: Nee, jy moet nie huil nie. Ek gaan nie toelaat dat jy huil nie.
Brooke : Nee daar's net iets agter my kontaklens.
Frederic: Yes, you couldn't expect Brooke to keep anyone in sight.
Dotty (pointing at Selsdon without seeing him): But he was standing right there in the stalls before we started! I saw him!
Brooke: Van wie praat ons?
Belinda: Moenie worry nie. Ons verstaan jy kan nie sien nie.

¹ *Noises off* performance, 2018, <https://youtu.be/qM-x-Z7yE8>

Brooke: Julle praat van Selsdon? Ek's nie blind nie. Daar's Selsdon.

The places and theatre names were changed to South African Places:

Act 1

Weston-super-Mare – Bloemfontein

Yeovil – Boshof

Stockton-on-Tees – Cape Town

Act 2

Ashton-under-Lyne – Kimberley

Stockton-on-Tees – Cape Town

Aberystwyth – Johannesburg

5.3.1 Pre-production of *Noises off* (2018)

When a revolving stage is used, the set must be very sturdy to endure the turning of the set. All the steps and ladders must be painted white and taped down to ensure that it is durable for all the action taking place on stage. The lighting bar must be high up to accommodate the safe turning of the revolving stage and set. Sufficient light backstage must be provided to ensure that the actors can find their props and be aware of any tables and chairs backstage.



FIGURE 5.1: FRONT SET IMAGE OF *NOISES OFF* (Heydenrych, 2018).



FIGURE 5.2: BACK SET IMAGE OF *NOISES OFF* (Heydenrych, 2018).

The revolving stage was built specifically for the performance of *Noises off* since the UFS Wynand Mouton Theatre does not have a build-in revolving stage. This revolving stage is 6 400mm in diameter, and the rest of the set was built on top of it.

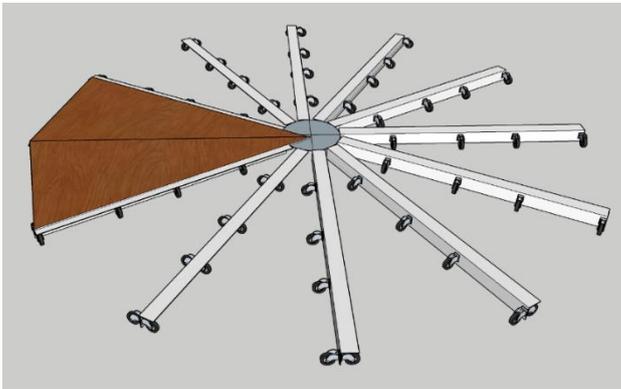


FIGURE 5.3: 1ST IMAGE OF THE REVOLVE STAGE DESIGN (Hewetson, 2020).

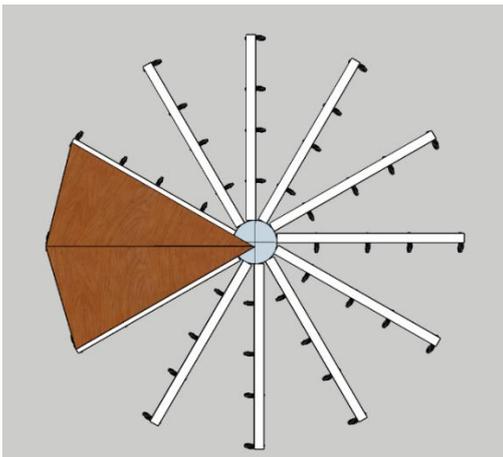


FIGURE 5.4: 2nd IMAGE OF THE REVOLVE STAGE DESIGN (Hewetson, 2020).

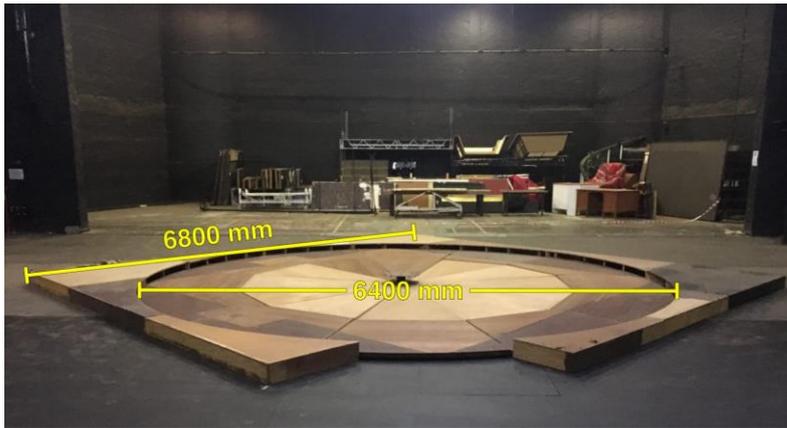


FIGURE 5.5: IMAGE OF THE COMPLETED REVOLVE STAGE (Hewetson, 2020).

The set was constructed out of set pieces that were strong and durable enough to withstand the action taking place on stage. Most of the stairs were from previous productions as well as the flats used. All flats were secured and weighted down to ensure sturdiness and safety. Special care was taken to fix stairs to the set and screwed down to the wooden floor for sturdiness. White masking tape was glued to individual steps for actors to see it in dim light on stage.

5.3.2 Rehearsals and plotting of *Noises off* (2018)

The budget was tight for such a big production, and thus some of the set pieces were from previous productions (Heydenrych, 2019: personal communication). Rehearsals and repetitions of tricky movements were the key to ensuring the safety of everyone involved in this production. Some of the potential safety hazards identified in the text analysis were present, and other potential safety hazards presented themselves during the plotting of the characters. Careful plotting was key in ensuring that everyone knew where to step and where and how to move amongst the furniture. To avoid possible injury, moving up and downstairs had to be practised at slow speed first and gradually speeding up the action as necessary in the production. Each potential safety hazard is listed below next to the solution.

TABLE 5.1: VISUAL DEDUCTION OF NOISES OFF ACT 1, 2 AND 3.²

Text analysis	Visual deduction
Act 1	
Garry is running up the stairs p.52, scene 1.6.	Garry does not run up the stairs; he walks up the stairs at a faster pace. (cf. attached video clip 1 https://youtu.be/dh6UOTzlohA)
Brooke is rushing out of the linen cupboard into the bannister, page 52, scene 1.6.	Brooke does not rush forward when Garry opens the linen cupboard; she steps forward out of the door. (cf. attached video clip 1 https://youtu.be/dh6UOTzlohA)
Brooke head buds Poppy and steps backwards onto Garry's hand, page 55, scene 1.7.	The whole incident of Brooke head budding Poppy and stepping on Garry's hand is hidden behind the sofa to mask that it does not take place. (cf. attached video clip 1 https://youtu.be/dh6UOTzlohA)
Frederic runs with his trousers around his ankles, page 78, scene 1.10.	Freddy does not run with his trousers around his ankles; he walks a little faster. (cf. attached video clip 2 https://youtu.be/rZuSicQQ1Oo)
Brooke runs downstairs in heels, page 81, scene 1.10.	Brooke wears low-heeled boots. She also does not run down the stairs but instead moves slower. (cf. attached video clip 3 https://youtu.be/OM7-h4Prc5k)
Frederic jumps up the stairs with his trousers around his ankles, page 87, scene 1.10.	Frederic running around and up and down the stairs with his trousers around his ankle is carefully plotted and rehearsed. The actor does not move too quickly to avoid any possible injury. (cf. attached video clip 3 https://youtu.be/OM7-h4Prc5k)

- At the top of the stairs, the last step is higher than the rest. This can be a very dangerous situation and should have been avoided when the set was

² Youtube link to the video deduction of *Noises off*, <https://www.youtube.com/playlist?list=PLtdB8iTh0sjoB7MQAb6t0cRzJbadyYMft>

constructed. Every actor that runs up or down the steps knows about this step, and during rehearsals, familiarised themselves with it.



FIGURE 5.6: IMAGE OF THE TOP STEP (*Noises off*, 2018).

- Every actor that runs on or off stage faces the possibility of injury, but with rehearsals and careful plotting, any collision or fall were avoided.

Act 2	
The snatching of the axe between Garry, Dotty, Frederic and Belinda, page 46, scene 2.5.	The axe is made out of wood. The actors fighting over the wooden axe was carefully choreographed and rehearsed to perfection, to avoid any injuries. The timing was everything. (cf. attached video clip 6 https://youtu.be/ogMhvV9qf0Q)
Dotty ties Garry's shoelaces together and then Garry falls as he is making his entrance upstairs, page 61, scene 2.6.	Dotty ties Garry's shoelaces together, but the laces are tied somewhat loosely to allow Garry to move somewhat. The crash when Garry falls down the stairs was done with sound effects. (cf. attached video clip 8 https://youtu.be/814lt8X-dCl)
Brooke loses her contact lens, Lloyd, Belinda and Dotty guide her to the window. Brooke bumps her head against the set and then falls over the sofa, page 65, scene 2.6.	When Brooke loses her contact lens, she runs into the door blocking it with her arms and then when Lloyd and Belinda push her through the window, she lands on a mattress placed on the other side. (cf. attached video clip 9

	https://youtu.be/LsEo1GgyMHg)
Garry jumps down the stairs shoelaces still tied, page 65, scene 2.6.	Garry needs to hop up and down the stairs. The stairs were narrow and had a railing, which made it easier to move around for Garry, and his blocking was rehearsed to avoid any injuries. (cf. attached video clip 10 https://youtu.be/V1p-dgVg9jA)

- Brooke lying in the middle of the floor doing her relaxation exercises could cause one of the other actors to trip over her if they misstep. Timing, in this case, was critical to avoid possible injury. (cf. attached video clip 4
<https://youtu.be/cwEjkSF6SE8>)
- The actors tackling each other and fighting were rehearsed, first at a slow choreographed pace and then speeding the action up until the required speed was achieved, and everyone knew exactly what to do. (cf. attached video clip 7
<https://youtu.be/8CSMMze92nY>)
- The set needed to be very sturdy for all the stunts; the actors manhandle each other such as Garry and Freddy fighting on the stairs. (cf. attached video clip 5
https://youtu.be/1C8ZyqLj_Q4)



FIGURE 5.7: IMAGE OF GARRY AND FREDDY FIGHTING ON THE STAIRS (*NOISES OFF*, 2018).

Act 3	
Garry runs up the stairs with the bag and box, page 16, scene 3.3.	Garry runs up the stairs, taking two steps at a time at a moderate speed, with the bag

	and box and at the top of the stairs, he trips and falls. This is all choreographed and rehearsed to ensure he does not get hurt during his fall. (cf. attached video clip 11 https://youtu.be/5N70b6TSORw)
Garry falls over Frederic's bag and box, page 22, scene 3.4.	Garry almost falls over the railing tripping over Frederic's bag and box as he exits the bedroom. This is carefully planned and rehearsed to ensure he does not fall over the railing. (cf. attached video clip 12 https://youtu.be/5Lh6KfUi_CA)
Garry falls over the bag and box at the top of the stairs and then fall down the stairs, page 37, scene 3.5.	Garry places his bag and box at the top of the stairs and then, moments later, he trips over them and falls down the stairs and lands at the bottom. This whole piece was carefully choreographed and rehearsed to perfection. Garry knew exactly how to fall down the stairs to avoid any injuries. (cf. attached video clip 13 https://youtu.be/x-5_J0LyBUs)

Noises off have many hazards that were creatively solved by designing, building and using the set by well-plotted and rehearsed movements by agile actors. Each action was expertly choreographed and rehearsed, and everyone knew what to do to avoid injuries.

5.3.3 Performance of *Noises Off* (2018)

Farce is a dramatic comic piece that uses highly improbable situations, stereotyped characters, extravagant exaggeration, and violent horseplay. Acting in farce requires great respect for character motives, attention to individual rhythms, and ease and elasticity in blocking that allows the action to flow unimpeded towards great comic collisions (Sensagent, 2012:online). This means actors who are fully engaged and physically alert. One of the characteristics of farce is acting out “physical violence” as if it was happening to redirect the audience’s attention. These may include slaps, kicks, falls, manhandling and accidents that occur at high speed. *Noises off* is a typical farce that provides for many of these activities and to avoid possible injury to actors is the primary concern in this production.

The UFS third-year students gave an outstanding performance with admirable safety consciousness. The actors kept to the rehearsed and plotting during both rehearsals and performances of the hazardous scenes. Every precaution was taken to ensure the safety of every actor, no matter how small the risk.

5.4 *MACBETH (2013)*

The students of the Dubai American Academy performed *Macbeth* in 2013, directed by Pdraig Downey. The play was performed in the traditional Shakespearian style with a minimal set design. Nothing was changed in the script.

5.4.1 Pre-production of *Macbeth*

Since *Macbeth* made use of the traditional Shakespearean minimal set design, the stage and setting stay the same for the entire performance with no scene changes. The design made use of stepped rostra shaped like wide stairs leading to the throne. The claw-like shapes were added to give the stage a strange appearance to assist with the looming doom present in the play.



FIGURE 5.8: IMAGE OF *MACBETH'S* SET (Downey, 2013).

The lighting in the play was the traditional lighting setting used in a conventional play. The costumes the actors wore were kept simple and did not change throughout the performance. The props used were made of wood or cardboard, such as the axe or the swords. Electric lanterns were used that were easy to handle and posed no danger towards the cast or audience.

5.4.2 Rehearsals and plotting of *Macbeth*

Macbeth was performed in very low lighting, with some scenes happening in complete darkness. This means that the actors must be particularly sure where they need to go to avoid injury. Some of the hazards found in the video were not present in the text and will be listed below, along with the solution to prevent injury.

TABLE 5.2: VISUAL DEDUCTION OF *MACBETH* ACT 1, 2, 3, 4 AND 5.³

Text analysis	Visual deduction
Act 1	
Fire under the cauldron, page 1.	No fire or cauldron is used in the performance. (cf. attached video clip 1 https://youtu.be/O0qNe8yrS-c)
Night scene – torches are used.	No torches are used. (cf. attached video clip 1 https://youtu.be/O0qNe8yrS-c)

- For the witches scene, the stage is mostly dark, with little backlighting. All the witches stood still while delivering their lines, eliminating the possibility of injury.



FIGURE 5.9: SCREENSHOT OF THE WITCHES SCENE (*Macbeth* performance, 2013).⁴

- When *Macbeth* beheads the previous Thane of Cawdor, the axe he uses is made of wood, and the blow never touches the actor; lights are cleverly used to hide the fact that the actor does not follow through with his action. (cf. attached video clip 2 <https://youtu.be/EcqT-4Pydlo>)

Act 2

³ Youtube link to the video deduction of *Macbeth*, <https://www.youtube.com/playlist?list=PLtdB8iTh0sjo1sUmtGoGzMdtNuuPpOGB>

⁴ *Macbeth* performance, 2013, <https://www.youtube.com/watch?v=Fz5rlxFM9MQ>

Night scene – torches are used	An electric lantern is used, eliminating any potential fire hazards. (cf. attached video clip 3 https://youtu.be/3LOUbHQUzP4)
--------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Act 3	
Night scene – torches are used	No torches were used. (cf. attached video clip 4 https://youtu.be/UK-S995Pmoo)

- When the three murderers kill Banquo, the fight is a short choreographed piece; the wooden swords never make contact with the actor, and the lights shining in the eyes of the audience are used to mask his death. (cf. attached video clip 4 <https://youtu.be/UK-S995Pmoo>)

Act 4	
Night scene – torches are used	An electric lantern is used, eliminating any potential fire hazards.
The dagger used to kill Macduff's family, page 111.	When the murders killed Macduff's family, the fight was a short choreographed piece, and the wooden swords never make contact with the actors. (cf. attached video clip 5 https://youtu.be/e2ZmsGuGas8) It can be noted that the scene was not very convincing. The audience found it amusing.

Act 5	
Night scene – torches are used	An electric lantern is used, eliminating any potential fire hazards. (cf. attached video clip 6 https://youtu.be/q57erz-1lzw)
The swords of <i>Macbeth</i> and young Siward for their duel, page 145.	<i>Macbeth</i> killing young Siward was quick, and timing was everything in the fight. (cf. attached video clip 7 https://youtu.be/14mT8SW2gc4)
The swords of <i>Macbeth</i> and Macduff for their duel, page 147.	During <i>Macbeth</i> and Macduff's fight when <i>Macbeth</i> is killed, the fight was well choreographed, and with the use of lights,

	<p><i>Macbeth's</i> death was masked. (cf. attached video clip 7 https://youtu.be/14mT8SW2gc4)</p>
--	------------------------------------------------------------------------------------------------------------------------------------------------

- During the battle, all the fights were well choreographed, and the sword never made contact with the actors. (cf. attached video clip 7 <https://youtu.be/14mT8SW2gc4>)

Macbeth was rehearsed, and everything was choreographed and timed to create perfect fight scenes and performance.

5.4.3 Performance of *Macbeth* (2013)

Macbeth's (2013) set is minimalist. The dramatic action depends mostly on the inner action of the actors expressed through soliloquies and intimate scenes, with two to five characters participating. The most significant safety challenges in a Shakespearian play are the stage-fight or battle scenes in which 'dangerous' weapons like swords, knives and daggers are used. In this production, these dangers were avoided by the use of safe props. The only props were the wooden sword and daggers that the actors used, and all the deaths were cleverly masked by the use of the lights (blackout).

5.5 DOGG'S HAMLET (2019)

Unlike a 'normal' Shakespearian plays, this one needs a set and is full of fast physical action with language that will confuse you. *Dogg's Hamlet* by Tom Stoppard (1979) was performed by the UFS Drama and Theatre Arts Department second-year students and co-directed by Dion van Niekerk along with DeBeer Cloete. *Dogg's Hamlet* was performed at the UFS Wynand Mouton Theatre on campus in 2019. The traditional staging was changed, with the audience seated on stage and the action happening in front of them.



FIGURE 5.10: IMAGE OF DOGG'S HAMLET SET 1 (Van Niekerk and Cloete, 2019).⁵

5.5.1 Pre-production of *Dogg's Hamlet* (2019)

The set of *Dogg's Hamlet* was kept simplistic. *Dogg's Hamlet* was a workshopped play, which means that there was no formal set design, but rather an improvised setup that, over time, became an acting space with odd pieces of decor with the result as shown below.



FIGURE 5.11: IMAGE OF DOGG'S HAMLET SET 2 (Van Niekerk and Cloete, 2019).

The set was placed in the area between the main and back curtains. The lighting bar was shifted back to cover the back of the stage. The lighting bar was also positioned higher because of the height of the castle in the second half of the play being tall. Adequate light was provided for the actor on the catwalk. The actor had lots of time to get up to the catwalk and to come down safely.

With the changing of the traditional stage, the audience seating was created out of raked rostra's sloping forward on the stage. The raked seating consisted of 40 individual seats, and a railing was installed around the seats to prevent anyone from falling off the rostra. With the seating changes came a lot of safety hazards, especially regarding evacuation. Since the seating was created on stage, lines were marked out on the floor to indicate the route from the seats to the nearest and only backstage emergency exit. An usher was stationed at the beginning of the seating area to assist in case of an emergency. The seats were far enough on stage so that the fire curtain could be permanently lowered.

Dogg's Hamlet has a lot of quick scene changes, and so the set stays the same, but the props and décor changes. To accommodate all the quick changes in the performance, the props and décor were kept to a minimum with small items the actors can move. The

⁵ *Dogg's Hamlet* performance, 2019, <https://youtu.be/JnQCPFUbm2k>

costumes the actors wore were simple in design with no hindrance of the actor's movements. Long-length dresses fell just above the actor's ankles; thus, keeping the actors from tripping over the costume.

5.5.2 Rehearsals and plotting of *Dogg's Hamlet* (2019)

The safety hazards identified in the text were easily overcome by rehearsing the ball play, fight scenes and quick changes happening within the play. The researcher watched the video of the performance a few times to establish how the potential safety hazards were solved. A few new hazards appeared that were not present in the text. All the hazards, along with their solutions, are listed below.

TABLE 5.3: VISUAL DEDUCTION OF *DOGG'S HAMLET* ACT 1.⁶

Text analysis	Visual deduction
Act 1	
The boys are throwing the football across the stage, page 1.	The boys playing with the tennis ball, in the beginning, was rehearsed and controlled, thus ensuring that no one is in harm's way and that the ball does not damage the theatre equipment (lights). (cf. attached video clip 1 https://youtu.be/_EtMsNqOiU)
The boys are throwing the building material to build the set, page 7-8.	The throwing of the crates and boxes were also rehearsed. The boys were able to catch the crates by the open side of the crate, and the boxes were normal light cardboard boxes. (cf. attached video clip 2 https://youtu.be/AAwzNorLvNo
Hamlet kills Polonius, page 22.	When Hamlet kills Polonius, Hamlet stabs at Polonius, but the blow does not make contact. (cf. attached video clip 5 https://youtu.be/BipsBf1ARfl)

⁶ Youtube link to the video deduction of *Dogg's Hamlet*,
https://www.youtube.com/playlist?list=PLtdB8iTh0sjp4nhijkmP_wokuT5fphmFw

Hamlet and Laertes duels to the death, page 25.	Hamlet and Laertes's duel at the end is precisely choreographed with plastic swords, and none of the blows is hard enough to cause any harm to any of the actors. (cf. attached video clip 7 https://youtu.be/kGtYjHzVmNU)
Hamlet stabs Polonius in the 2-minute run through, page 28.	When Hamlet kills Polonius, Hamlet stabs at Polonius, but the blow does not make contact. (cf. attached video clip 8 https://youtu.be/hdSLMSEwV0M)
Laertes and Hamlet duels to the death in the 2-minute run through, page 28.	Hamlet and Laertes's duel at the end is precisely choreographed with plastic swords, and none of the blows is hard enough to cause any harm to any of the actors. (cf. attached video clip 9 https://youtu.be/8pkP7gKHY-k)

- Dogg kicking Easy into the boxes was rehearsed, and the light cardboard boxes broke his fall. (cf. attached video clip 3 https://youtu.be/5r52tJ_LF64)



FIGURE 5.12: IMAGE OF THE CRATHES USED (*Dogg's Hamlet*, 2019).



FIGURE 5.13: IMAGE OF THE BOXES USED (*Dogg's Hamlet*, 2019).

- In *Hamlet*, the king and queen descend the stairs; these stairs have no railing, and the queen is wearing a long dress. The queen's dress was at ankle length to avoid her tripping over it and falling down the stairs, and rehearsal was also key. (cf. attached video clip 4 <https://youtu.be/ZyclT4XWhXY>)
- Hamlet and Laertes fighting at Ophelia's grave were also rehearsed, and the actors knew how to jump on one another without hurting each other. (cf. attached video clip 6 <https://youtu.be/i1y2aGzbbos>)

Dogg's Hamlet required a lot of rehearsal because of all the quick scene changes taking place. The fight scenes were kept short and the blocking simple.

5.5.3 Performance of *Dogg's Hamlet* (2019)

Dogg's Hamlet was rehearsed, and all safety precautions were taken to ensure that not only the actors and the technical crew are safe, but also the audience. The unusual use of the theatre and backstage areas made for an interesting and unique performance.

5.6 CHAPTER 5 CONCLUSION

Although each production comes with its potential safety hazards, these hazards can easily be solved by rehearsing the play. In this chapter, the performance videos of the three plays were looked at to identify how the potential safety hazards, presented in the texts, were creatively solved in the final production. Other hazards not present in the texts of the three plays, but is a result of the director's choice, were also identified and discussed.

In the next chapter, **Conclusion, recommendations and limitations of the study**, a synopsis will be given of the study and end with the limitations and recommendations

CHAPTER 6

CONCLUSION, RECOMMENDATIONS AND LIMITATIONS OF THE STUDY

6.1 INTRODUCTION

An in-depth study was conducted to identify the potential SH within the theatre. The study followed a qualitative study design with inductive reasoning to build concepts and theories (cf. Chapter 2) as posed by Creswell (2014). Two research techniques that link to each other were used in the study, namely, a literature study and a case study. The literature study (cf. 2.3.1) investigated the back- and frontstage areas of the theatre and determined what the potential safety hazards are. The script analysis and visual analysis were used as methods in case studies. The script analysis (cf. 2.3.2.2) examined the texts of three chosen plays and determined the potential safety hazards found in the texts. The visual analysis (cf. 2.3.2.3) focussed on the pre-production, rehearsal and performance stages of each of the chosen plays and determined how the potential safety hazards were creatively solved. The analysis of the types of hazards found backstage (cf. Chapter 3) assisted the researcher in identifying those safety hazards that could be deduced from the text (cf. Chapter 4), as well as how these identified hazards were creatively overcome during the rehearsal and performances of the particular plays (cf. Chapter 5).

In Chapter 5, the aim was to establish the creative ways in which the possible safety hazards were creatively solved or overcome in the performances of the three plays by utilising a visual analysis based on the script analysis (cf. Chapter 4). The SH's identified in the texts were compared with the same scenes in the productions by visual scrutiny of these scenes in die video recordings of the three performances. Easy access to visual material such as photo's, designs and specific YouTube video-clips of these scenes were provided in the text electronically. These videos demonstrated how the SH's were overcome in the productions. The references to, and viewing of these video clips, validated the researcher's findings and comments on how the SH's were overcome by designers, directors, choreographers and actors in the performed productions on video.

Chapter 6 aimed to provide a synopsis and to summarise the findings of the study. This study was conducted based on three research questions.

Below, an overview of the study, an analysis of the research questions, how these objectives were attained, and the findings of the study will be provided.

6.2 OVERVIEW OF THE STUDY

6.2.1 Research question one

The main research question was:

Which potential safety hazards can be identified and which preventive measures can be followed in the back- and frontstage area of a theatre during pre-production, rehearsal and performance stages?

To identify the potential safety hazards in the back- and frontstage areas, a literature study (cf. Chapter 3) was conducted. The literature study focused on set construction, lighting, props, costumes, and the action of actors on stage. The general functioning and purposes of the safety procedures were given to ensure the safety of everyone working in the theatre.

In the literature study, the processes and procedures of each section backstage were discussed in Chapter 2, such as the design and set constructions, how props are handled, choreography and stage combat procedures on stage, and other applicable safety precautions. The main focus was on the safety procedures that must be followed to avoid any potential safety hazards that may occur in the backstage areas.

6.2.2 Research question two

The second research question was:

Which possible safety hazards can be identified in the texts of three plays, namely, Noises off (2001); Macbeth (1606) and Dogg's Hamlet (1979)?

The findings of the literature study in Chapter 3 informed the script analysis (cf. Chapter 4) of the three texts of the chosen plays to identify the potential hazards presents in the scripts. In Chapter 4, the scripts of the three plays were analysed. These texts were read a few times to understand the meaning, content and given circumstances of each text. Special attention was given to the technical aspects and actors movement requirements of these texts that might require safety precautions. This analysis helped the researcher to identify

the potential safety hazards in each text. The safety hazards were listed and discussed in the format of grids mentioning the specific scene and the possible safety hazards. In Chapter 5, these grids presented in Chapter 4 were valuable in identifying how these hazards were overcome in the productions.

Noises off (2001), written by Michael Frayn, was a physically demanding play with lots of movement and a complicated set that held serious challenges for SH's in the design (cf. 4.3.3). Known as a bedroom farce, *Noises off* is full of misunderstandings, risky physical actions, improbable plots and many slamming doors. The three-act play has a lot of entrances and exits with actors running on and off stage as well as up and downstairs that could involve dangerous movement challenges to actors.

In terms of the set design, the set for *Noises off* had to be sturdy and spacious to accommodate all the action executed at high speed on stage. The bannister had to be sturdy as actors ran into the railing and lean on it. The stairs had to be wide enough and sturdy to accommodate the actors falling down the stairs. Adding on to that, the set had to be built on a revolving stage for the set to show the front- and backstage areas. The technical director had to make sure that the set was properly secured to prevent the set from falling over when the scene changes take place. All stair edges and open spaces had to be properly marked, and adequate lighting had to be provided backstage to avoid any potential safety hazards. The study found that the designer designed a safe and sturdy set that proved to prevent SH's for the cast in the performance of the play.

The actor's movements in *Noises off* had to be choreographed and timed to avoid any possible injuries. Their actions had to be rehearsed, first in slow motion until the actors were comfortable with the sequence, and then sped up to the desired tempo. It was crucial that the actors stuck to the choreographed routine and not improvise, to safeguard all theatre practitioners from unnecessary potential hazards. The researcher found that the actors took great care when rehearsing and performing all the high-speed action and that safety consciousness was applied.

Macbeth (1606) is one of Shakespeare's classic tragedies with complex characters. The ambition and hunger for power ultimately lead to the downfall of *Macbeth*, which makes this play a classic tragedy. The researcher focused on stage combat and the use of dangerous props in this production. Other than *Noises off*, the full set design was not required, as Shakespearian plays make use of the spoken word by characters to describe the scene.

In *Macbeth*, the use of weapons such as swords and daggers are used regularly. The props masters had to ensure that the weapons are designed to ensure safety and are in good working condition before its use. One example is to ensure that the edges of the blades are blunt to avoid injuring other actors in stage combat scenes (cf. 3.14.2) or retractable blades are designed for the weapons. In *Macbeth* (1606), torches are often used in the various night scenes. The use of props needs to form part of the choreography, as the actors need to know how to use swords and daggers safely in fight scenes. The researcher found that all the swords and daggers were made of wood with blunt edges and that battery-charged electric lanterns were used to avoid any potential fire hazards in the productions.

As with any fight scene, the fight directors/instructor must choreograph the fight. The sequence had to be rehearsed in slow motion until the actors are comfortable with the sequence. After that, the sequence had to be sped up to the desired tempo. The researcher found that the action scenes were not executed at high speed and that lights, blinding the audience, were used to cover the landing blows the actors made in one specific production.

Dogg's Hamlet (1979) is a one-act comedy written by Tom Stoppard, with a satirical view of political oppression and nonsensical usage of English words. The researcher analysed *Dogg's Hamlet* (1979), similarly to *Macbeth* (1606) by focusing on the use of props and stage combat.

Dogg's Hamlet (1979) has many scene changes, and with many quick entrances and exits. Along with all the scene changes come stage combat scenes in which the actors fight with props like swords. Similarly to *Macbeth*, the fight sequences needed to be rehearsed first in slow motion, and then sped up to the desired tempo and the blades needed to be blunt. Another activity that required extra rehearsal time was the throwing of the ball at the beginning of the play. It is the actor's responsibility to ensure that the ball is not thrown too high in order not to damage the lights. The researcher found that the swords used were plastic and that the actor focused on the task of not throwing the ball too high to avoid hitting or touching the overhead stage lights.

In brief, each text and the three productions had potential safety hazards, and it was the duty of designers, the directors, actors and creative teams to ensure that the plays were executed safely.

6.2.3 Research question three

The third research question was:

How were the possible safety hazards, identified within the texts of the three analysed plays, creatively solved during the pre-production, rehearsal phases and in the final performances?

After the text analysis of the chosen plays, the researcher looked at the pre-production, rehearsals and performances of the three plays to determine how the identified safety hazards were creatively solved. The researcher also paid attention to the hazards that were not identified in the texts but occurred with the design, blocking and performances of the plays. Similarly, the researcher watched the videos of the plays a few times and compared the hazards in the texts with those found in the performance stages.

Noises off (2018) was directed by Thys Heydenrych and performed by the third-year Drama and Theatre Art students at the UFS Wynand Mouton Theatre. The script was adapted to make the show more relevant for a South African audience. The script required that the set be built on a revolving stage as the acting takes place on the front- and backstage area. The Wynand Mouton Theatre does not have a built-in revolve stage, so one was built with the set on top. All the steps edges were marked, and the lighting bar lifted in order not to damage the lights when the revolving set was turned. The set was built out of old and new pieces that were durable enough to withstand the action taking place on stage.

Careful plotting and rehearsals were key in ensuring everyone's safety. The potential hazards identified in the text of *Noises off* were present along with new potential hazards identified during the performance. All the tricky movements (cf. 5.3.2) were carefully plotted and rehearsed, first in slow motion and then sped up to the desired tempo. All the action was carefully choreographed, and with the cooperation of agile actors, the execution was successful and safely executed in the production.

As a farce, *Noises off* is a very energetic play where actors needed to be fully engaged and physically alert. A farce also consists of violent physical acts such as slaps, kicks and falls. In the production, the safety of the actors was the main concern. The UFS third-year students gave a performance with the necessary safety consciousness.

Macbeth (2013) was directed by Padraig Downey and performed by the students of the Dubai American Academy. The play was performed in true Shakespearean style with a minimal set design. Traditional lighting design was used, and the safely designed costumes of the actors stayed the same throughout the play. The swords and daggers were made out of wood with blunt edges, and battery-charged electric lanterns were used; thus, avoiding any potential injuries or fire hazards.

Macbeth was performed in very dim stage lighting with some scenes taking place in darkness. The actors needed to be certain of the blocking and movements on stage to avoid any injuries (cf. 5.4.2). The highest safety issue was the stage combat scenes. These scenes were more comically executed than realistically and seriously, as required by the text. The weapons had blunt edges, and the landing blows were masked with the clever use of lights with blackouts in this production.

Dogg's Hamlet (2019) was directed by Dion van Niekerk and Debeer Cloete and performed by the UFS second-year Drama and Theatre Arts students. The play was also performed at the UFS Wynand Mouton Theatre. The conventional stage design, as described in the text, was changed. The audience was seated on the stage, and the action was performed backstage behind the normal stage area. This setting created a unique theatre experience.

The set for *Dogg's Hamlet* was kept simple and easy to construct. The set was erected behind the back curtain, and the lighting bar was also lifted to light the actors who made use of the catwalks as part of the movement plan of the performance. There were many scene changes, and minimal props and décor were used. The audience members consisted of about 40 people seated on individual raked seating. This seating arrangement posed a safety hazard in terms of evacuation. In the case of an emergency, the audience members had to exit backstage along with the actors. Ushers were placed at the foot of the seating arrangement that would assist in the evacuation if needed.

Similarly to *Macbeth*, *Dogg's Hamlet* also had stage fights. These fights were first rehearsed slowly after being choreographed and then sped up to the desired tempo. The fight scenes were kept short and the choreography simple. The swords and daggers used had blunt edges and never made real contact with the opponent, avoiding any injury.

In brief, each production had its safety hazards, but with careful planning and rehearsals, the potential safety hazards were avoided. Actor's movements and fight scenes were the most hazardous activities, which the actors overcame with safety consciousness.

6.3 TRUSTWORTHINESS: CREDIBILITY, DEPENDABILITY, CONFIRMABILITY AND TRANSFERABILITY

Trustworthiness in qualitative research ensures that other researchers can use this study method in future when conducting a similar study involving a literature study, script- and visual analysis of productions. In this study, the process used for each chapter was carefully described and followed the process for each play.

6.3.1 Credibility

Credibility refers to the researcher reporting the information as clearly as possible (Botma *et al.*, 2016:292). To ensure credibility, the researcher followed a systematic inquiry, starting with a literary study, comprised of multiple sources, to identify theories on the possible safety hazards back- and onstage in the theatre. The researcher also reported on the procedures that needed to be taken to avoid any safety hazards in the back- and onstage areas. This was followed by a focused text analysis of three plays to identify safety hazards. The researcher listed the possible safety hazards from each text and also took into account the given circumstances, external action and structure of each play. The analysis of the productions of the same three plays focused on the same possible safety hazards. The researcher analysed the visual material of the chosen plays to identify how the potential safety hazards identified in the texts were creatively solved during the final performance of each play. The researcher documented the text analysis next to the visual analysis to compare the hazards and how it was creatively solved in each production. This technique ensured that the theories on theatre safety were applied in the text analysis and in practice.

6.3.2 Dependability

Dependability refers to the quality and stability of the data (Botma *et al.*, 2016:292). To ensure reliability, the researcher was consistent by using the same script- and visual analysis method to analyse the possible safety hazards in the three productions and how they were creatively solved in the final performance of each play. The similar grids indicating safety hazards in scenes from the texts, and in the viewed scenes from the productions contributed to the stability and credibility in the comparisons of these hazards in the study.

6.3.3 Confirmability

Confirmability shows the transparency and objectivity of the study (Botma *et al.*, 2016:292). Confirmability was ensured by providing an informed literature study of all the possible safety hazards that can be found back- and onstage. The script- and visual analysis of the three plays were analysed objectively and according to standard academic theories for text analysis. The researcher followed the theories of Aristotle and the method developed by Thomas (2009), Kiely (2016) and relevant modern theorists on text analysis theories to ensure that each text was analysed in the same manner. The researcher further analysed the videos and photos of each production similarly and followed the same method to analyse the visual material of each play.

6.3.4 Transferability

Transferability refers to the extent to which other researchers can duplicate the research (Botma *et al.*, 2016:292). In this study, transferability was ensured by describing the method used for the script- and visual analysis of the possible safety hazards in the three productions. The researcher made use of grids to indicate the safety hazards found in the analysed texts and compare that to the safety hazards found during the visual analysis. This method made it easy for the researcher to ensure transferability from the literary analysis of safety hazards to praxis in the investigative research on safety hazards identified in the performances during video analysis.

6.4 LIMITATIONS OF THE STUDY

The researcher identifies the following limitations in the study:

- That there might be a lack of focus or a specific methodology in research on specific safety requirements and the study of SH's, as a separate field of study in theatre research and praxis. This study contributes to bridging the gap in theatre research. The researcher extended the normal script analysis techniques, created by Aristotle, Thomas and Kiely, by incorporating and concentrating specifically on the requirements of SH's in the texts and performances that directors and designers of sets, costumes, props, choreographers and actors had to take note of and to implement to ensure safety in the theatre productions.
- The UFS Drama and Theatre Arts Department did not design or perform *Macbeth*, which was produced by the Dubai American Academy. The researcher struggled to

find any information regarding the safety prevention measures in design for the performance of *Macbeth*. The researcher had to rely upon comments on possible safety hazards identified in the text and only had the video performance to comment on how these safety hazards were overcome as deduced from the video.

6.5 RECOMMENDATIONS FOR FUTURE STUDY

For this study to produce noteworthy and valuable results, the following additional recommendations are to be noted:

- A discussion session, attended by the director, designers and actors during the first day of planning a new production that focuses specifically on possible safety hazards that the designs, rehearsals and performance of this production might require; can be implemented. This session can end with ideas on hazard prevention and plans that can be applied to ensure safety in the production.
- All theatre practitioners should be required to know the procedures and regularly practise the evacuation procedure in dummy exercises; that formal training of these evacuation plans and procedures be compulsory to all theatre practitioners.

6.6 CONCLUDING REMARKS

It is critical that the theatre industry create a heightened awareness of possible SH's under theatre practitioners and will induce the same perception of safety hazards applicable to the theatre industry and for all involved in a specific production. The study concludes that the main aim must be to identify, take preventative measures, and follow the prescribed safety procedures and regulations to minimise the number of hazards that could arise in the theatre and that it can be done through thorough script and scene analysis.

The research methods utilised in this study and the research findings can be applied as a basis for analysing play texts and specifically identifying possible safety hazards, as well to provide ideas on how to creatively prevent and solve these hazards to ensure the safety of all participants in a production.

REFERENCE LIST

Armstrong, W. 2016. *ACMA Theatre Company: Technical Theatre - Shop Safety*, 17 June, online video, retrieved on 20 January 2020,

<https://www.youtube.com/watch?v=54DaZiF4658>

Bahn, S. 2013. *Workplace hazard identification: What do people know and how is it done?* (online).

<http://10.ecu.edu.au/cgi/viewcodent.cgi?artiv>

Retrieved on 14 November 2017.

Baker, H. 1968. *Stage Management and Theatre craft: A Stage Manager's handbook*. London: J. Garnet Miller LTD.

Barba, E. 2002. *The Essence of Theatre*. TDR (1988) 46(3): 12-30, (online JSTOR).

Bellman, W.F. 1974. *Lighting the stage: Art and practice*, 2nd ed. New York: Chandler Publishing Company.

Blackburn, S., Conroy, P., Kyle, N., and Peters, R. 2011. *A guide for safe working practices in the New Zealand theatre and entertainment industry*. Auckland: University of Auckland. (Health and Safety guide).

Boleslavsky, R. 2010. *Acting: The first six lessons*. London: Routledge.

Botma, Y., Greeff, M., Mulaudzi, F.M. and Wright, S.C.D. 2014. *Research in Health Sciences*. Cape Town: Heinemann.

Brockett, O.G. and Ball, R. J. 2011. *The Essential Theatre*, 10th ed. New York: Wadsworth Cengage learning.

Carver, R.K. 2013. *Stagecraft Fundamentals*, 2nd ed. Amsterdam: Focal Press.

ChocoJon. n.d. *Flickering Torch Prop*. (online).

<https://www.instructables.com/id/Flickering-Torch-Prop/>

Retrieved on 23 April 2020.

Day, L.B. 2013. Turn off the danger: The lack of adequate safety incentives in the theatre industry. *New York university law review* 88(4):1308-1347.

De Vos, A.S., Strydom, H., Fouche, C.B. and Delpont, C.S.L. 2011. *Research at grass roots for the social sciences and human service professions*, 4th ed. Pretoria: Van Schaiks.

Du Toit, D., Bosch, D., Woolfrey, D., Godfrey, S., Cooper, C., Giles, G.S., Bosh, C., and Rossouw, J. 2008. *Labour Relations Law: A comprehensive guide*, 5th ed. LexisNexis: Durban.

Frayn, M. 2001. *Noises off*. (online).

<http://www.lmplayers.com/wp-content/uploads/Noises-Off-EDITED.pdf>

Retrieved on 8 April 2016.

Gillett, G. and Sheehan, J. 2017. *The Production Manager's Toolkit*. New York: Routledge.

Gillette, J.M. 2008. *Theatrical Design and Production*, 6th ed. New York: McGraw Hill.

Gittins, L. n.d. Hazards of Overhead Projectors. *Chron* (online).

<https://smallbusiness.chron.com/hazards-overhead-projectors-63159.html>

Retrieved on 17 March 2020.

Gloman, C. and Napoli, R. 2007. *Scenic Design and Lighting Techniques: A basic guide for theatre*. Amsterdam: Elsevier.

Gous, N. 2018. Rigger dies while setting up Global Citizen stage in Johannesburg.

Channel24 [online].

<https://www.channel24.co.za/Music/News/rigger-dies-while-setting-up-global-citizen-stage-in-johannesburg-20181201>

Retrieved on 4 January 2019.

Greenwood Theatre. 2018. *Greenwood Theatre Health and Safety Video*, 7 November, online video, retrieved on 20 January 2020,

<https://www.youtube.com/watch?v=EK963VA9HeM&t=75s>

Harris, M. 1976. *Theatre Props*. London: Studio Vista.

Hattingh, S. and Acutt, J. (Eds). 2009. *Occupational Health management and practice for health practitioners*, 3rd ed. Lansdowne: Juta and Co, Ltd.

Havel, G. 2016. *Construction Concerns: Proscenium Fire Curtains*. (online).

<https://www.fireengineering.com/content/dam/fe/online-articles/documents/2016/Havel72516.pdf>

Retrieved on 6 August 2019.

Hobbs, W. 1980. *Stage Combat: the action to the word*. London: Barrie and Jenkins.

Holloway, J. 2010. *Illustrated Theatre Production Guide*, 2nd ed. Amsterdam: Focal Press.

Houghton, C., Casey, D., Shaw, D. and Murphy, K. 2013. Rigour in qualitative case-study research. *Nurse researcher*. 20(4):12-17.

https://www.researchgate.net/publication/236072601_Rigour_in_qualitative_case-study_research

Retrieved on 3 November 2019.

Khomami, N. 2016. Italian actor pronounced clinically dead after on-stage hanging. *The Guardian* [online].

<https://www.theguardian.com/world/2016/feb/05/italian-actor-hanged-performance-clinically-dead-raphael-schumacher>

Retrieved on 15 September 2017.

Kiely, D. 2016. *How to read a play: Script analysis for directors*. London: Routledge.

Lee, C. and Grote, D. 1982. *Theatre: Preparation and performance*. Glenview: Scott, Foresman and Company.

Life Goes On Productions. 2010. *Build Your Own Stage Knife*, 6 August, online video, retrieved on 20 January 2020, <https://www.youtube.com/watch?v=BWCPcret5FY>

Maccoy, P. 2004. *Essentials of State Management*. London: A and C Black Publishers Ltd.

Maree, K, (Ed.) 2016. *First steps in research*, 2nd ed. Pretoria: Van Schaik Publishers.

Marsden, J. 2008. Drama student dies in theatre accident. *Yale Alumni Magazine* [online].
<https://yalealumnimagazine.com/articles/1937-drama-student-dies-in-theater-accident>
Retrieved on 15 September 2017.

Martinez, J.D. 1982. *A non-violent approach to stage violence*. Chicago: Nelson-Hall Publishers.

Mason, Kaleb and Julio. 2016. *Tech theatre safety video*, 12 August, online video, retrieved on 20 January 2020, <https://www.youtube.com/watch?v=UfOHmd0ADM0&t=76s>

Melone, S. 2017. Which Fabrics Are Most Fire Resistant? *Oureverydaylife* (online).
<https://oureverydaylife.com/which-fabrics-are-most-fire-resistant-12351234.html>
Retrieved on 24 March 2020.

Merlin, B. 2010. *Acting: The basics*. London: Routledge.

Merriam, S.B. and Tisdell, E.J. 2016. *Qualitative Research: A guide to design and implementation*, 4th ed. New York: Jossey-Bass.

Monday, M. 2017. *Directing with the Michael Chekhov technique*. London: Bloomsbury Publishing Plc.

Morgan, N.H. 1995. *Stage lighting for theatre designers*. London: The Herbert Press.

Morris, W. (Ed.). 1973. Theatre. In *The Heritage Illustrated Dictionary of the English Language* (p. 1333). New York: American Heritage Publishing CO., INC.

Mrocicka, P. 2013. *Script Analysis for Students: Script Analysis Importance*. (online).
<https://broadwayeducators.com/script-analysis-basics-for-students-understanding-the-play-part-one/>
Retrieved on 24 April 2020.

myRisks Information. 2017. Strobe Lighting. *BBC* (online).
<https://www.bbc.co.uk/safety/resources/aztopics/strobe-lighting.html>
Retrieved on 17 March 2020.

Nel, J.H. 1992a. *Veiligheid in die Teater*. Pretoria: Tshwane University of Technology. (Unpublished Dissertation – MTECH).

Nel, J.H. 2001b. *Occupational Safety Legislation for the South African Entertainment Industry – A proposal*. Pretoria: Tshwane University of Technology. (Unpublished Dissertation – PhD).

Nicholls, D. 2009. Qualitative research: Part one – *Philosophies*. *International Journal of Therapy and Rehabilitation* 16(10):526-533.

https://www.researchgate.net/publication/234055157_Qualitative_Research_Part_One_-_Philosophy

Retrieved on 3 May 2019.

Niaymelanin. 2016. *Tech Theatre Safety: Lighting and Rigging*, 29 September, online video, retrieved on 20 January 2020, <https://www.youtube.com/watch?v=aZhES5cm1qs&t=5s>

Nieuwenhuis, J. 2014. Qualitative research designs and data gathering techniques. In Maree, K. (Ed.). *First steps in Research*. Pretoria: van Schaik publishers.

NOSA. 2012. *SAMTRAC, participant manual*, 4th ed. NOSA: South Africa.

Ramani, S. and Mann, K. 2016. Introducing medical educators to qualitative study design: Twelve tips from inception to completion. *Medical Teacher* 38: 456-463.

Reid, F. 2001a. *The staging handbook*, 3rd ed. London: A and C Black (Publishers) Limited.

Reid, F. 2001b. *The stage lighting handbook*, 6th ed. London: A and C Black (Publishers) Limited.

Reilly, D. 2019. Dogg's Hamlet, Cahoot's Macbeth. *TheaterScene.net*. (online).

www.theaterscene.net/plays/offbway-plays/doggs-hamlet-cahoots-macbeth/darryl-reilly/

Retrieved on 20 April 2020.

Republic of South Africa. 1993. *Occupational Health and Safety Act no. 85 of 1993*.

Roberts, L. 2010. Onstage disasters: when props go wrong. *Telegraph*. (online).
<http://www.telegraph.co.uk/culture/theatre/theatre-news/8042724/Onstage-disasters-when-props-go-wrong.html>

Retrieved on 15 September 2017.

Rossol, M. 1991. *Stage Fright: health and safety in the theatre*. New York: Allworth Press.

Rossol, M. 2001. *The artist's complete health and safety guide*, 3rd ed. New York: Allworth Press.

Selden, S. and Rezzuto, T. 1972. *Essentials of stage scenery*. New York: Meredith Corporation.

Sellery, J. 2011. *Play it safe: a safety manual for school theatre/ studios*. British Columbia: Vancouver Board of Education.

Sensagent. 2012. *Bedroom farce*. (online).
<http://dictionary.sensagent.com/bedroom%20farce/en-en/>

Retrieved at 20 April.2020.

Shakespeare, W. 1606. *Macbeth*, edited by F.C.H. Rumboll. Cape Town: Maskew Miller Longman.

Shayla and Sophia. 2014. *Tech Theatre Safety Video*, 17 September, online video, retrieved on 20 January 2020, <https://www.youtube.com/watch?v=j983mEumWns&t=51s>

Skinner, D. 2007. *Qualitative methodology: An introduction*. London: Sage.

Sofer, A. 2006. *The stage life of props*. (online).
<https://www.press.umich.edu/pdf/047209839X-fm.pdf>

Retrieved on 14 April 2019.

Specialty Theatre. n.d. *Flame Retarding Options for Stage Curtains*. (online).
<https://www.specialtytheatre.com/specialty-theatre-customer-support/bulletins-white-papers/flame-retarding-options-for-stage-curtains/>

Retrieved on 24 March 2020.

Stoppard, T. 1979. *Dogg's Hamlet, Cahoots Macbeth*. (online).

<https://epdf.pub/doggs-hamlet-cahoots-macbeth.html>

Retrieved on 21 November 2019.

Strong, J. 2010. *Theatre Buildings: a design guide*. London: Routledge.

Sylvia, C., Neal, M., Kelley, J. and Palmer, E. 2017. *Tech Theater Safety Video*, 7 September, online video, retrieved on 20 January 2020,

<https://www.youtube.com/watch?v=KSKCZH4aic&t=80s>

Tarrant, S. 2016. Safety and the Entertainment Industry – Theatrical/ Studio/ Stage. *DARCOR*. (online).

www.darcor.com/safety-theatrical-stage/

Retrieved on 29 January 2020.

Theatre crafts.com. n.d. *Safety in Live Entertainment* (online).

www.theatre crafts.com/pages/home/topics/safety/

Retrieved on 29 January 2020.

The Gremlin. 2015. *Gaynor Young returns to the State Theatre 26 years after near-fatal stage accident*. (online).

<https://www.thegremlin.co.za/2015/11/18/gaynor-young-returns-to-the-state-theatre-26-years-after-near-fatal-stage-accident/>

Retrieved on 14 April 2020.

The Health and Safety Executive. n.d. *Theatre*. (online)

<https://www.hse.gov.uk/entertainment/theatre-tv/theatre.htm>

Retrieved on 13 April 2019.

The Institute for Working at Height. 2017. *Protecting workers from falls...as well as fallen objects*. (online).

<https://profbody.co.za/protecting-workers-from-falls-as-well-as-fallen-objects/>

Retrieved on 13 April 2019.

Thomas, J. 2009. *Script Analysis for Actors, Directors and Designers*, 4th ed. Amsterdam: Focal Press.

Thrice, T. 2017. *An introduction to stage properties*. (online).

<https://www.slideshare.net/ThriceTheSun/an-introduction-to-stage-properties>

Retrieved on 14 April 2019

Twijnstra, R. and Durden, E. 2014. *Theatre directing in South Africa: Skills and inspiration*.

Durban: Twist Theatre Development Projects.

University of Florida. 2020. *Tiza Garland stage combat class outline*. (online).

https://arts.ufl.edu/site/assets/files/178735/stage_combat_syllabus-spring_2020.pdf

Retrieved on 20 March 2020.

Whaleys. n.d. *All You Need To Know About Fire Retardant Fabrics*. (online).

<https://www.whaleys-stages.co.uk/need-know-fire-retardant-fabrics>

Retrieved on 24 March 2020.

Welker, D. 1977. *Stagecraft: A handbook for organisation, construction and management*.

Boston: Allyn and Bacon, INC.

Wheatley, K. 2009. *Guidelines for Theatre Safety*. Texas: The Texas Education Agency.

Wilson, L. 2008. *Why Do Broadway Theatres Keep a 'Ghost Light' Burning on the Stage?* (online).

<https://www.playbill.com/article/ask-playbillcom-the-ghost-light-com-153440>

Retrieved on 24 March 2020.

Yale University. n.d. *Prop Weapon and Stage Combat Policy for Live Productions*. *Yale Undergraduate Production* (online).

<https://up.yalecollege.yale.edu/policies/prop-weapon-and-stage-combat-policy-live-productions>

Retrieved on 29 January 2020.

Young, G. 2013. *About – 'ear 'ear!, 'ear 'ear!*, weblog post, 27 March, retrieved 17 September 2017,

<http://www.earearblog.com/about>

UNIVERSITY OF THE FREE STATE PRODUCTIONS

Heydenrych, T. 2019. *Noises off*, 27 March, online video, accessed on 14 January 2020, <https://youtu.be/qM-x-Z7yE8>
https://www.facebook.com/pg/ufsdrama/photos/?tab=album&album_id=2251198795148851

Van Niekerk, D. and Cloete, D. 2019. *Dogg's Hamlet*, 29 May, online video, accessed on 14 January 2020, <https://youtu.be/JnQCPFUbm2k>
https://www.facebook.com/pg/ufsdrama/photos/?tab=album&album_id=2276555645946499

DUBAI AMERICAN ACADEMY PRODUCTION

Downey, P. 2013. *Macbeth*, 25 November, online video, accessed on 14 January 2020, <https://www.youtube.com/watch?v=Fz5rlxFM9MQ>

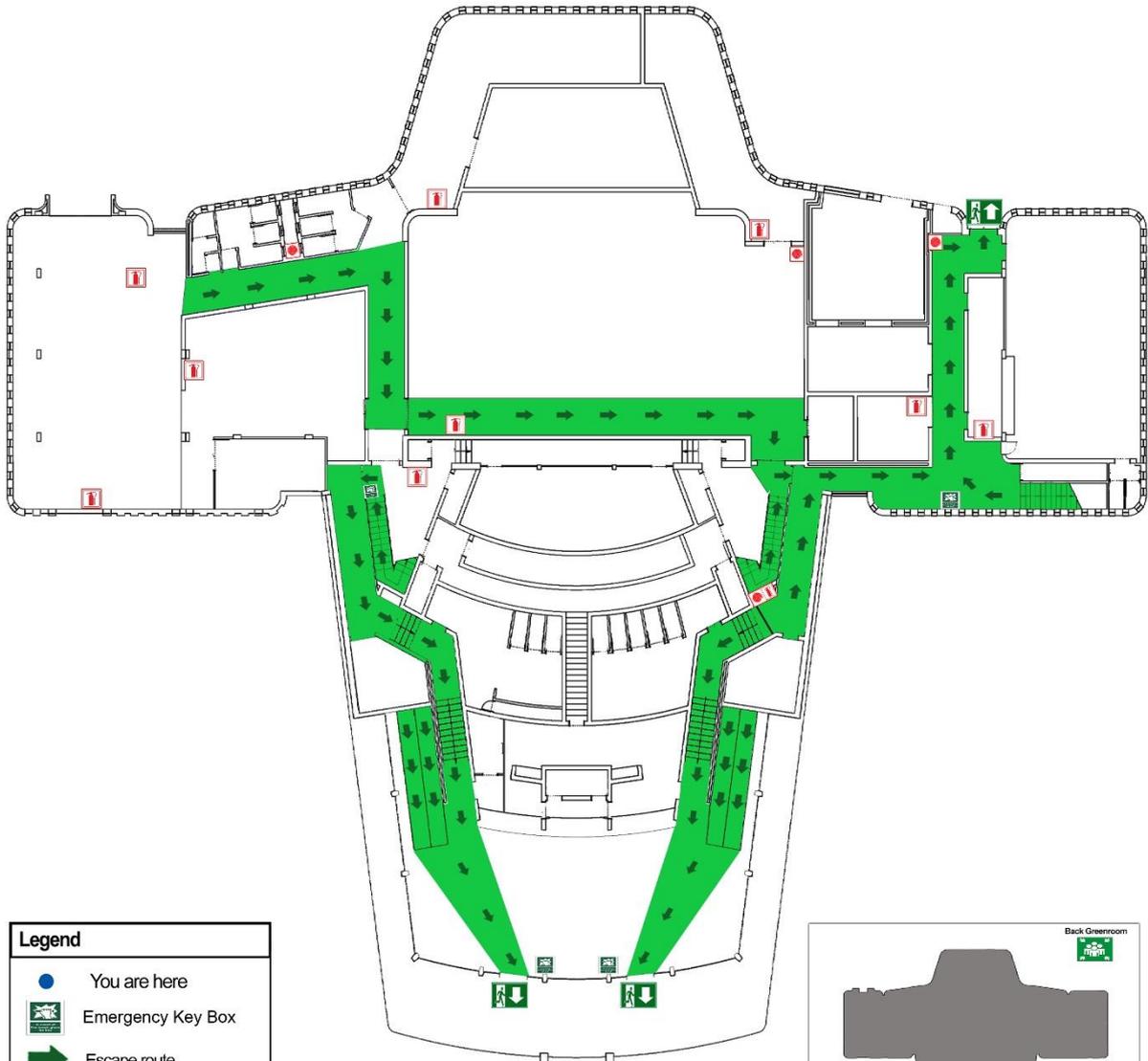
APPENDICES

APPENDIX A
WYNAND MOUTON THEATRE EVACUATION PLAN

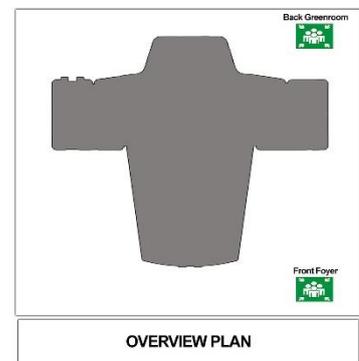
Wynand Mouton Theatre (UFS)

FIRE ESCAPE PLAN

Ground Floor



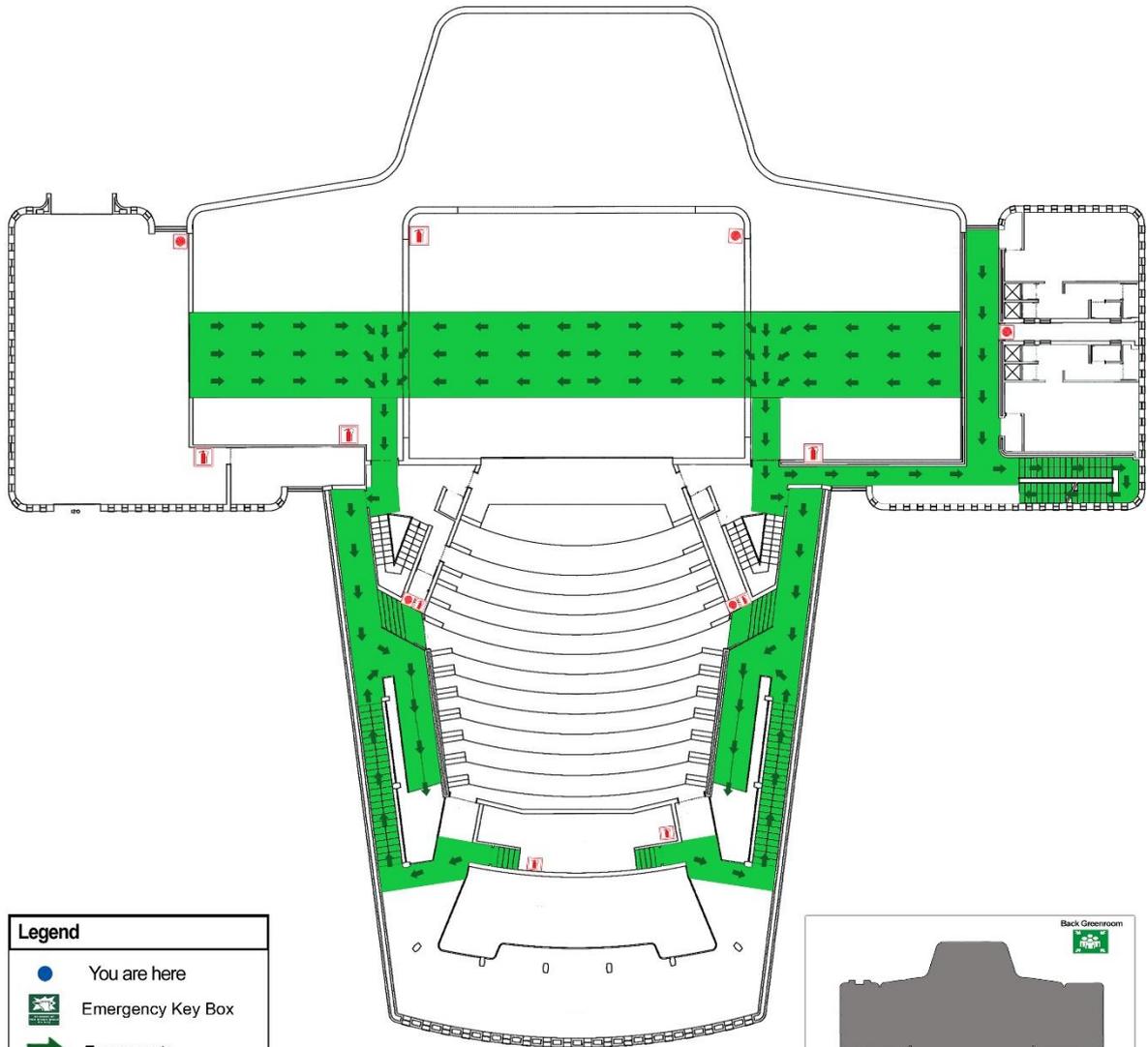
Legend	
	You are here
	Emergency Key Box
	Escape route
	Emergency exit
	Fire Extinguisher
	Fire hose reel
	Evacuation assembly point



Wynand Mouton Theatre (UFS)

FIRE ESCAPE PLAN

First Floor



Legend	
	You are here
	Emergency Key Box
	Escape route
	Emergency exit
	Fire Extinguisher
	Fire hose reel
	Evacuation assembly point

