

Contents

Preface

vii

| | | |
|----------|---|------------|
| 1 | Commercial Aviation: A High-Risk Activity | 1 |
| | Air safety as a model of successful learning | 3 |
| | Limitations to success in organizational learning | 4 |
| | Reductions in the rate of improvements in safety levels | 10 |
| | The reduction in the rate of learning as consequence of a model | 12 |
| 2 | Event Analysis as an Improvement Tool | 15 |
| | Potential and uses of event analysis | 15 |
| | Life cycle of information on events | 20 |
| | Limitations of event-based learning | 29 |
| 3 | Safety in Commercial Aviation: Risk Factors | 35 |
| | Classification of risk factors | 36 |
| | Analysis of risk factors | 38 |
| | Summary of the treatment of risk factors | 89 |
| 4 | Explanation of the Reduction in the Rate of Learning in Complex Environments | 91 |
| | Systems that learn from errors and systems that avoid errors | 91 |
| | Barriers to organizational learning | 94 |
| | Organizational paradigms and their role in learning | 108 |
| | Paradigms and modes of action | 110 |
| | Adjustment of the different organizational paradigms to the needs of learning in air safety | 112 |
| 5 | Organizational Learning in Air Safety: Lessons for the Future | 117 |
| | Difficulties for the change in organizational paradigm | 117 |
| | Change of organizational paradigm | 123 |
| 6 | Meaning and Trust as Keys to Organizational Learning | 129 |
| | Meaning and its role in organizational learning | 129 |
| | Role of trust in organizational learning | 141 |

| | | |
|----------|---|------------|
| vi | <i>Improving Air Safety through Organizational Learning</i> | |
| 7 | The Future of Improvements in Air Safety | 145 |
| | Criteria for the definition of an organizational learning model | 145 |
| | Determinant factors of learning ability | 147 |
| | Alternative learning model | 149 |
| 8 | Conclusions | 159 |
| | Limitations of the current learning model | 159 |
| | Changes in the relationships between variables within the system | 160 |
| | Future lines of development | 162 |
| | Final conclusions | 163 |
| | <i>References</i> | <i>167</i> |
| | <i>Index</i> | <i>177</i> |