ENGLISH FOR SCIENCE AND TECHNOLOGY

Research Paper (II)
Objetives

- To identify the basic communicative functions of Research papers
- To analyse their macrostructure: primary and secondary
- To identify conventions of Introductions in Research Papers
Macrostructure

- Primary structure: sections
- Secondary structure: moves or sections’ parts
Macrostructure

Primary structure

IMRD pattern. Swales (1990)

Procedure

Title
Abstract
Introduction
Methods/Materials
Results
Discussion
Acknowledgments
References
Purpose

- **Introduction**
  - State the problem
  - Attract interest in the topic

- **Methods**
  - Describe methodology, materials or subjects and procedures

- **Results**
  - Describe findings-presentation of data

- **Discussion**
  - Give account of what has been learned in

- **What was the problem?**

- **How did you study the problem?**

- **What did you find?**

- **What do these findings mean?**
Introduction

- The purpose of this paper is to....
- This paper describes and analyzes...
- My aim in this paper is to...
- In this paper we report on...
Introduction

Swales (1990)

- Establishing a research territory
- Establishing a niche
- Occupying the niche
Moves in Research Paper Introductions (Swales, 1990)

- Establishing a research territory
  - By showing that the general research area is important, central, interesting, problematic, or relevant in some way (optional)
  - By introducing and reviewing items of previous research in the area (obligatory)

- Establishing a niche
  - By indicating a gap in the previous research, or by extending previous knowledge in some way (obligatory)

- Occupying the niche
  - By outlining purposes or stating the nature of the present research (obligatory)
  - By listing research questions or hypothesis (in some fields)
  - By announcing principal findings (in some fields)
  - By stating the value of the present research (in some fields)
  - By indicating the structure of the RP (in some fields)
Establishing a research territory

- A) By showing that the general research area is important, central, interesting, problematic, or relevant in some way (optional)
  - Strong opening sentences
    - Recently, there has been growing interest in...
    - The possibility of... has generated wide interest in...
    - The development of ... is a classical problem in...
    - The development of ... has led to the hope that...
    - Knowledge of....has a great importance for...
    - The increasing interest in... has heightened the need for...
    - The study of... has become an important aspect of...
    - A central issue in...is....
    - Many recent studies have focused on...
Establishing a research territory *Swales* (1990)

- B) By introducing and reviewing items of previous research in the area (obligatory)
  - Reviewing the literature (citing patterns)
    - Jones (1997) concluded that illiteracy can be related to...
    - Jones (1997) has concluded that
    - Jones (1997) concludes that
    - Jones (1997) investigated the causes of illiteracy
    - The causes of illiteracy were investigated by Jones (1997)
    - The causes of illiteracy have been widely investigated (Jones 1988, Hyon 2004)
    - The causes of illiteracy are complex (Jones 1988, Hyon 2004)
- **Little/few**
  - However, little information...
  - There is little research..
  - The department has few computers...
  - However, few studies...
- **No/none of**
  - No studies/data/calculations...
  - None of these studies/findings...
- **Contrastive statements**
  - The research has tended to focus on... rather than on...
  - These studies have emphasized..., as opposed to...
  - Although considerable research has been devoted to ..., rather less attention has been paid to...
Raising a question/hypothesis
- It would thus be of interest to learn how...
- If the results could be confirmed, they would provide strong evidence for...
- The findings suggest that this approach might be less effective when...

Extending previous knowledge in some way
- These recent developments in computer-aided design clearly have considerable potential. In this paper, we demonstrate...
- The literature shows that Rasch Analysis is a useful technique for validating multiple-choice tests. This paper uses Rasch Analysis to...
Occupying a niche Swales (1990)

○ Move 3ª:
  ● Purposive (P) The author or authors indicate their main purpose or purposes
    ○ The aim of the present paper is to give...
  
  ● Descriptive (D) The author or authors describe the main feature of their research.
    ○ This paper reports on the results obtained...
Materials and Methods

- Describe methodology, materials or subjects and procedures
Results

- Describe findings
- Presentation of data
Discussion

• Give account of what has been learned in the study-answer questions raised in the Introduction