

# Assessment of High Impact Practices in General Education Courses Using Text Mining and Natural Language Processing

Shubham Chavan  
chava005@rangers.uwp.edu  
University of Wisconsin Parkside  
Kenosha, Wisconsin, USA

Siddhesh Sutar  
sutar001@rangers.uwp.edu  
University of Wisconsin Parkside  
Kenosha, Wisconsin, USA

Shlok Katare  
katar001@rangers.uwp.edu  
University of Wisconsin Parkside  
Kenosha, Wisconsin, USA

Vijayalakshmi Ramasamy  
ramasamy@uwp.edu  
University of Wisconsin Parkside  
Kenosha, Wisconsin, USA

## ABSTRACT

Determining the applicability of a undergraduate course as a general education course based on High Impact Practices (HIP) using Text Mining and Natural Language Processing. The current process is manual and time consuming, this paper attempts to automate the process to aid decision making and improve time efficiency.

**Github Repository Link:** <https://github.com/ShlokKatare>

## KEYWORDS

High Impact Practices, General Education, Natural Language Processing, Text Mining

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## 1 INTRODUCTION

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## 2 LITERATURE REVIEW

// High impact practices (HIP)

The term high-impact educational practices(HIP) was introduced by Kuh in 2008 [3] and defined them as the following 10 components of undergraduate education: first-year seminars and experiences, common intellectual experiences, learning communities (LC), writing-intensive courses, collaborative assignments and projects, undergraduate research, diversity and global learning, service-learning and community-based learning, internships, and capstone courses and projects.

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Since they were identified, HIP has become a foundational strategy to increase student retention and completion rates in institutions of higher education. The inclusion of these HIP in a course structure is essential for it to be considered a General Education (Gen Ed) course which can be pursued by students of all faculties due to its introductory nature and broad course structure. Gen Ed courses are courses that support the advanced learning students will do the rest of their life. It introduces students to many new ideas, rather than training them in one specific subject, so that they are in a position to create linkages across a wide expanse of different topics and disciplines. Gen ed courses help build a baseline knowledge and impart critical thinking skills.

HIP is a group of different techniques and designs for teaching and learning that have proven to be beneficial for student engagement and successful learning among students from many backgrounds. Through intentional program design and advanced pedagogy, these types of practices can enhance student learning and work to narrow gaps in achievement across student populations.

HIP offers various benefits like better student - faculty relation, developing cooperation amongst students, active learning, prompt feedback and grievance addressal, and promotes inclusivity and accessibility.

**Table 1: High Impact Practices**

Sr. No.	High Impact Practice
1	First-Year Seminars and Experiences
2	Common Intellectual Experiences
3	Learning Communities
4	Writing-Intensive Courses
5	Collaborative Assignments and Projects
6	Undergraduate Research
7	Diversity/Global Learning
8	ePortfolios
9	Service Learning, Community-Based Learning
10	Internships
11	Capstone Courses and Projects

// Assessment – Impact of HIP in enhancing course performance

// Text mining

// Natural Language Processing (NLP)

Natural Language Processing (NLP) is a key technology for exploitation of text data, and NLP applications are rapidly growing. Text mining is frequently used in such applications [2], [1], but as the applications evolve, they incorporate a wide range of NLP technologies. This new trend is creating new demands for NLP, necessitating additional research.

### 3 EXPERIMENT

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### 4 RESULTS

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### 5 CONCLUSION

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### REFERENCES

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- [2] Marti A. Hearst. Untangling text data mining. In *ACL*, 1999.
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