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Artificial intelligence (AI) and how it affects the Learning and development in Libraries.

By

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Presentation Outline

AI and how it affects the L&D in libraries

L&D on AI skills

Library skills as drivers of AI in L&D

Deep learning and L&D

Locating AI in L&D

Advances of L&D in AI at UP Library.

Data optimisation and Personalization in L&D

Benefits AI in L&D

Teaching and Learning

Libby's AI process



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AI and how it affects the L&D in Libraries.

- The growing existence of Artificial intelligence (AI) places the Learning and development of library staff in the spotlight.
- With the growing prevalence of Robots and AI powered system there is a growing need of the alignment of employees to understand drifting of the traditional learning and development aspects used by librarians to a more advanced and aligned to AI and robotics driven learning and development.
- An AI and robotics driven Learning and development becomes a major aspect of the library workforce to be able to assist the anticipated AI and robotics driven customer.
- This can only be possible when learning and development is able to motivate during the sourcing, skilling, re-skilling and up-skilling of the workforce and present a convincing picture about the direction to be taken(Kaplan 2016, Park and Yen 2018)

L&D ON AI SKILLS

- L&D focus up-skilling & re-skilling of Library staff
- Skills to Learn at work
- Skills when Learning at their own pace
- Skills at the point of need
- On the job
- Just in time
- Personalised
- Microlearning
- AI Reality
- AI Scalability
- AI Affordability

LIBRARY SKILLS AS DRIVERS OF AI IN L&D



Deep learning and L&D



Deep Learning Deep learning is a subset of machine learning where artificial neural networks, algorithms inspired by the human brain, learn from large amounts of data.



Deep learning is more efficient than machine learning technique (in terms of providing result accurate in Learning and development) because in this regard, it uses perceptron and neuron or back propagation method (i.e., in these techniques, solve a problem by learning by itself [being programmed by a human being]) (Tyagi and Rekha 2020)



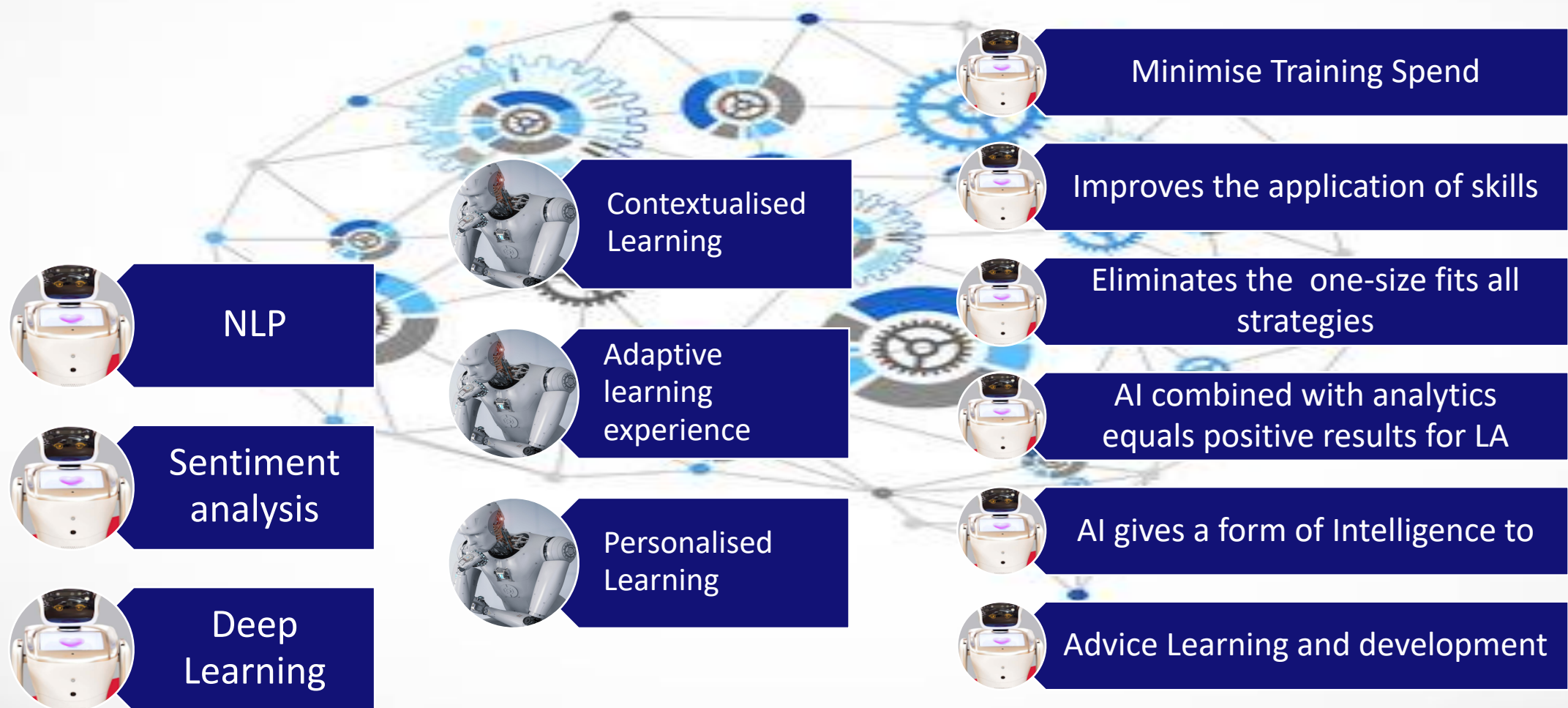
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Locating AI in L&D

- Deep learning exciting process are; Face recognition, image classification, speech recognition, text-to-speech generation, handwriting transcription, machine translation.
- In L&D the classification, categorisation of key words, search terms and frequent search of a topic or a course helps AI to understand common learning habit.
- In L&D Artificial Intelligence is very likely to impact the future of SEO through videos, images, voice search, and pre-trained models to assist in determining the learning path for an individual in online learning.



Advances of L&D in AI at UP Library



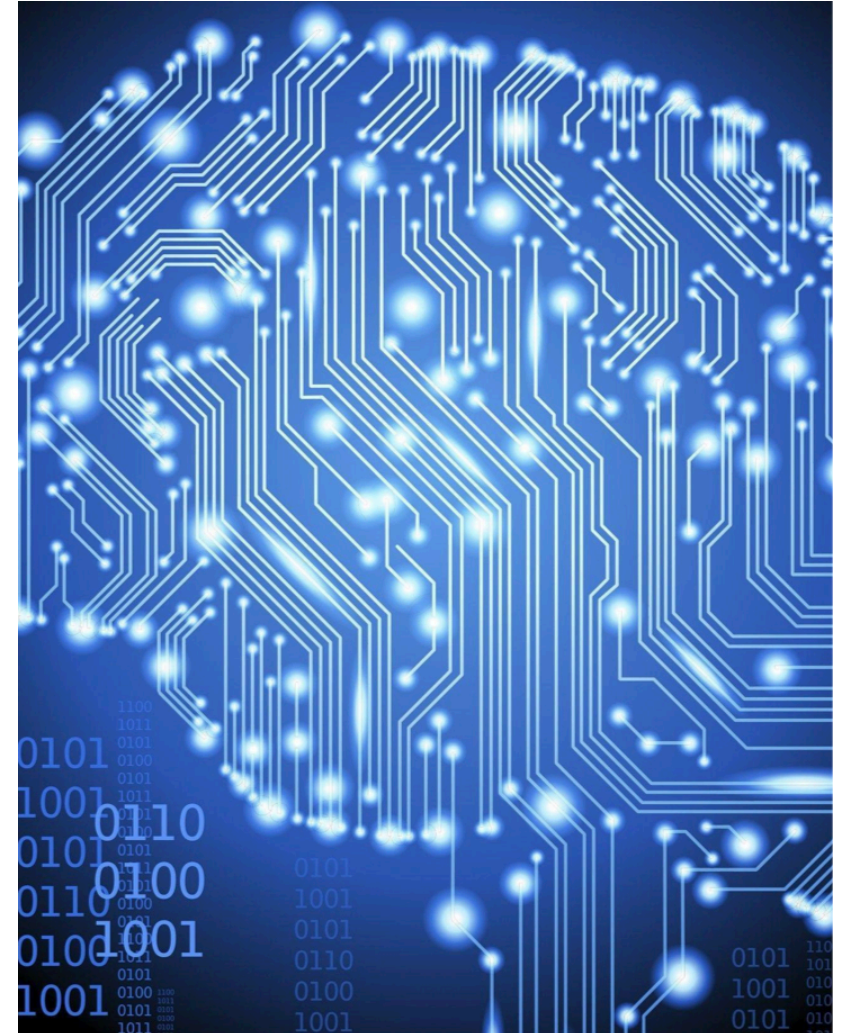
Data Optimisation & Personalisation in L&D

- Learner's Learning experience
- Learner Clean data
- Learner Skills data
- The Learner's learning History
- Use of 3rd party system for the following;
- Search Query optimisation
- Learner visit Activity
- Interaction with the course
- Types of courses visited
- Using internal data and tools to identify skills gaps in the organization
- Using external data resources and tools to identify skills gaps in the industry



Some application of AI in L&D

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- The element of L&D administration is to be a substance custodian
 - Content curation is a careful procedure of ceaselessly discovering, sifting and sharing the most applicable content to the correct learners.
 - AI can be used to determine the level of expertise, timetable, course and collecting individualised learning for appropriate appraisals
 - Machine learning can examine factors such as the number of offers the article got, how many articles were shared and ranked
 - AI is used to do content separation during instructional design process



Benefits of AI in L&D

We gain the following;

- Skills
- Knowledge
- Abilities
- Engagement
- Automated scheduling and delivery
- Resources allocation in line with task

This occurs in the following areas;

- Virtual Assistance
- Machine Learning
- Cognitive Computing
- Chatbots



TEACHING AND LEARNING WITH L&D



- PRODUCT EXPLORATION
- Teaching and Learning is our primary role, and therefore Learning and development strives to improve how we deliver teaching and Learning using AI
- Exploring personalised learning to provides some control to learners, by giving them a way to manage how they progress through learning activities
- We currently use AI to provide pre-determined learning pathways giving a learner more control over the direction of learning for staff
- Exploring AI that collects data to determine a learner's knowledge of a specific skill and creates a constantly evolving leaning pathways
- Exploring AI that enhances learning platform as well as making it responsive to the learner's needs adapting to their request using ML.

Libby's AI process

Define

- Define the problem

Collect

- Collect the correct data

Create

- Create a model

Test

The ability to assist with minimum challenges

Deploy

- Deploy the model for production

Update

- Update the model



What is automated



Problem

Client service



Data

Number of FAQ's



Create

Dialogue flow



Test

Ability to assist



Deploy

Where assistance is required



Update

Software, Hardware and new information



Potential of AI involved in T&L



Auto tags

- AI listens to the shared Video content, and starts to pick up Keywords ignorer to create multiple tags to help in content categorisation which can be edited for customization



AI powered Search

- In a learning content search AI analyses and understand the keywords to produce search results that are populated according to relevance to provide a more effective learning experience



Invite to watch

- Invite to watch is a social learning experience which automatically generates a list of learners who have engaged with the same content creating social learning environment in exploration



T&L and L&D LMS BOTS

- Advanced mentors
- Provide customised updates
- Provide onboarding to new recruits
- Address frequently asked questions
- Updates for safety and compliance, Library facilities
- Analyse learning shortcomings
- Learning chatbots are used in preparation procedure
- With an anticipation to also Bots providing reporting

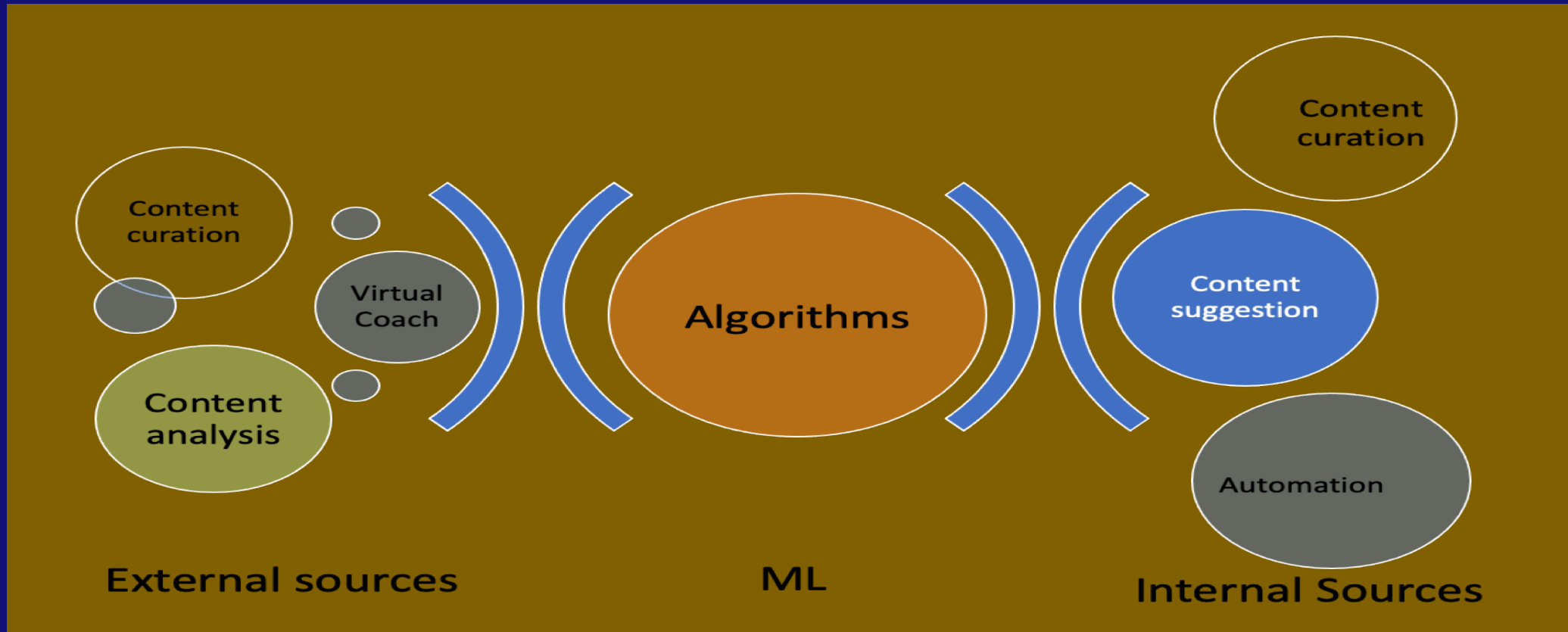
HYBRID USE OF AI IN L&D

LMS

EXPERIENTIAL & COLLABORATIVE LEARNING

- AI personalised and automated learning
- AI combines systems and curate customised content
- Relieves the Instructional designer's task
- Provides a competitive advantage
- Provides an automated personal learning experience

Content creation process using AI



Benefits of AI in T&L

- Increase the achievements of client service
- Reduce the normal time spent with the client
- Maximise efficiency in distribution
- Information investigation can improve learner's activity report
- Demonstrative Investigation can assist in learner problem report
- Elucidating investigation can assist in the progress funnel report
- Cluster analysis can assist in cluster report for Low and superior workers in a preparation program
- Descriptive analysis helps in following time and engagement metrics e.g., normal number of activities for the student
- The movement of client and Student retention metrics



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Conclusion

- Targeting the use of AI powered Systems lead by the L&D
- Continues revision of the progress of staff to assist the client using AI System
- All processes enshrine in UP hybrid model of Teaching and Learning
- Alignment of skills within the library for a fair distribution of the use of AI in all sections of the library
- Continuous review of the the process and user experience
- Learning and development is always informed by the developments in systems that accommodates AI
- Strive to maximise Library services staff development to assist students to achieve the goals using AI powered Systems

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