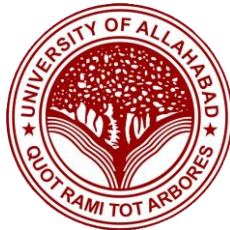


Training and Development Practices in Information Age: A Study of Select Organizations



Priyadarshani Singh

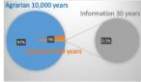
Under the Supervision of

Professor Arun Kumar

Department of Commerce and Business Administration

University of Allahabad

Introduction

- Mechanical work turns into digital work
- Ascending skill gap
- Speed of change 

The diagram illustrates the rapid pace of technological change across three eras. It features three overlapping circles: a large blue circle on the left labeled 'Agriculture 10,000 years', a medium orange circle in the middle labeled 'Industrial 100 years', and a small grey circle on the right labeled 'Information 10 years'. Arrows indicate the progression from agriculture to industry to information, highlighting the exponential increase in the speed of change over time.
- Knowledge and ideas - sources of economic growth
- Technology, pace, demands and resources
- In-tandem Training and Development
- T&D Practices of Information Age

Research Problem

To explore Training and Development Practices with the expanding horizon of the Information Age to handle the future demands of learning in corporate world.

Purpose

Trace and track the changes that took place in Training and Development Practices in Information Age.

Research Question

What are the Training and Development Practices in Information Age?

Research Questions

1 • What are Training and Development Practices?

2 • What is Information Age?

3 • What were the preceding ages?

4 • How did the Training and Development Practices transformed in different ages?

5 • What are the Training and Development Practices in Information Age?

6 • How Training and Development Practices are transforming in Information Age?

SD

PD

Research Questions

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Training and Development Practices

“Training and development practices are the customary, habitual, or expected procedures or ways of managing training and development by the organizations, industries or the countries.”

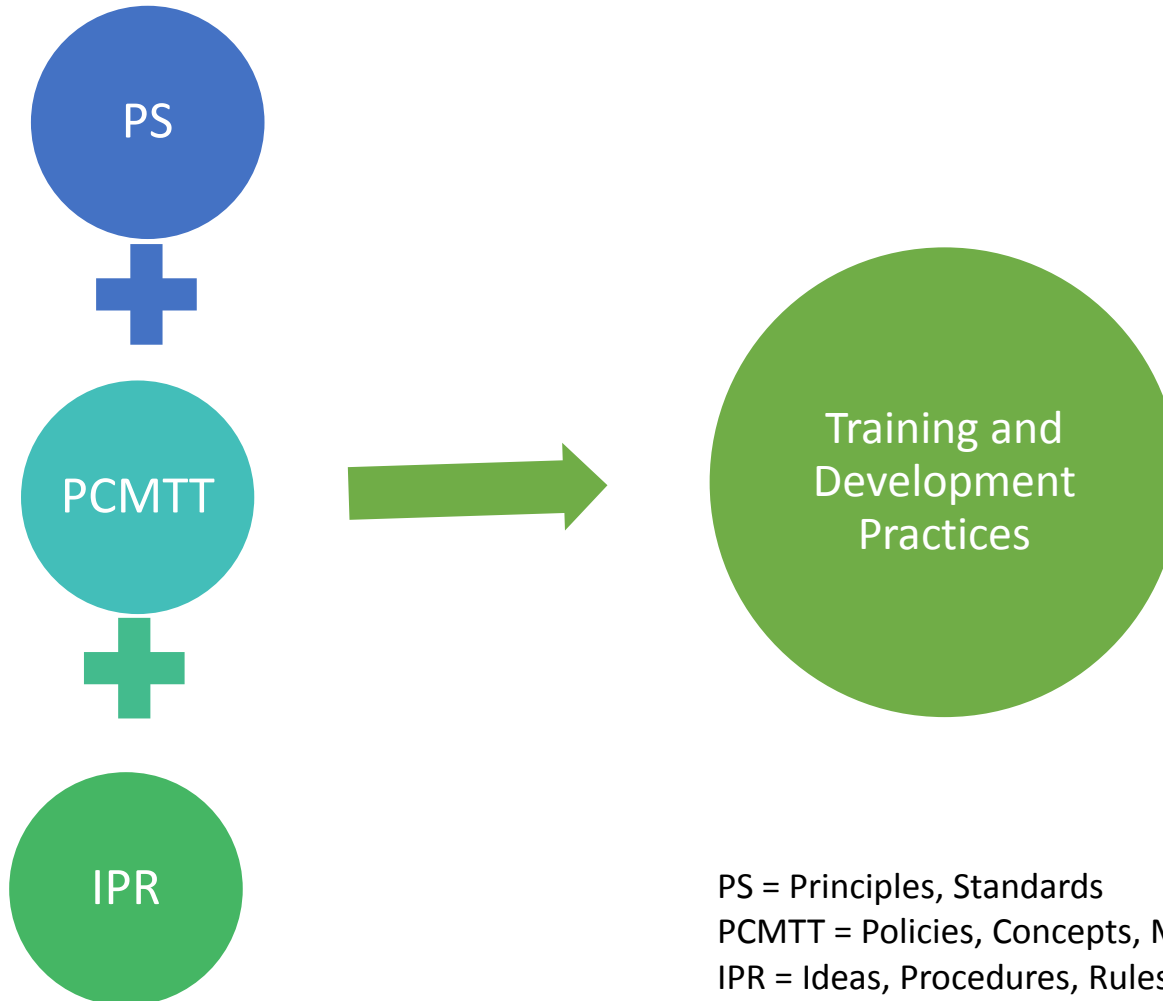
Literature

Training and Development Practices

Training and Development Practices are unique blend of:

1. Principles
2. Standards
3. Policies
4. Concepts
5. Tools
6. Methods
7. Techniques
8. Ideas
9. Procedures and
10. Rules

Training and Development Practices



PS = Principles, Standards

PCMTT = Policies, Concepts, Methods, Techniques, Tools

IPR = Ideas, Procedures, Rules

Research Questions

1 • What are Training and Development Practices?

2 • **What is Information Age?**

3 • What were the preceding ages?

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PD

Information Age

In the last quarter of the twentieth century, a technological revolution, centered around information, transformed the way we think, we produce, we consume, we trade, we manage, we communicate, we live, we die, we make war, and we make love.

Castells, M.
(2010)

IA is in a position to support the six business objectives : Improving Productivity, Reducing costs, Improving decision making, Facilitating collaboration, Enhancing customer relationships, Developing new strategic applications.

Turban &
Volonino
(2010)

Information Age

IA has transformed the world and offered everyone equal chance to create his or her own world.	Enyinna (2013)
Consumerization and SaaS like concepts are the backbone of IA work environment.	Boyd (2013)
The main features of information age are— hyper-specialization , horizontally-networked , highly-interconnected , less hierarchical , less command-and-control oriented organizations, with the big data as key basis of competition, growth and innovation.	Richard Nolan (2005)

IA Trends

- Political/State Trends
- Business Trends
- Economic Trends
- Technology and Communication Trends
- Transportation Trends
- People, Home and Family Trends

Research Questions

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RQ3: What were the preceding ages?

Preceding Ages

No.	Outlook	Hunter and Gatherers	Agrarians	Industrial
1	Work	Survival	Independence	Scientific management
2	Time	Exploration of natural laws	Natural laws	In tandem with machine schedules
3	Achievement	Survival of the fittest	Surplus and civilization	Scientific utilization of resources
4	Job	Egalitarian and non-egalitarian	Agriculture as process	Fixed duty and responsibility

RQ3: What were the preceding ages?

Preceding Ages

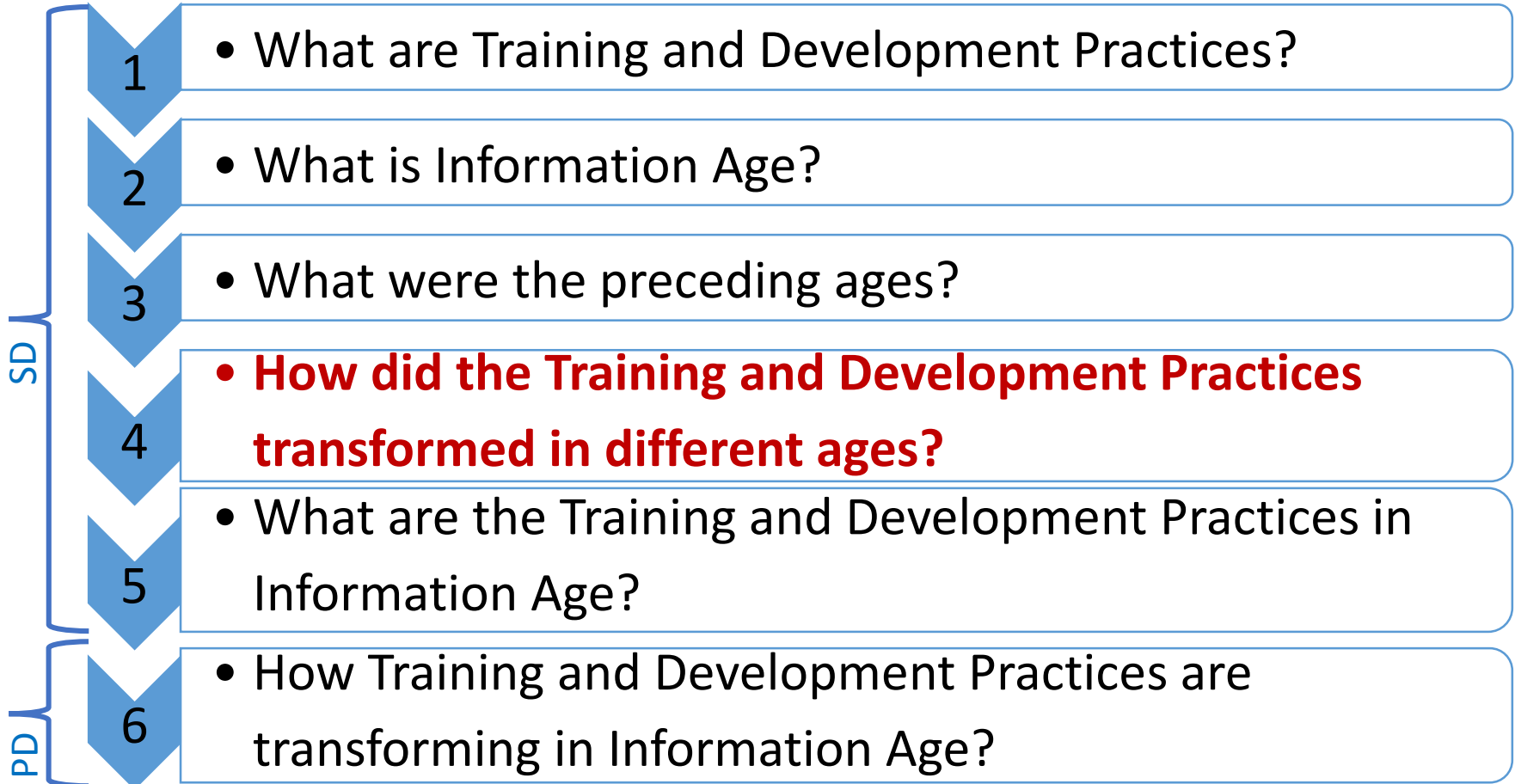
No.	Outlook	Hunter and Gatherers	Agrarians	Industrial
5	Motivation	Egalitarian benefits	Control	Compensation
6	Reward	Quarry and foodstuff, appreciation of family members	Produce of choice	Exploitation
7	Collaboration	Closed outlook	In cast structure	Darwinism, rugged individualism

RQ3: What were the preceding ages?

Preceding Ages

No.	Outlook	Hunter and Gatherers	Agrarians	Industrial
8	Administrati on	Imposed by nature	Taking charge	supervision
9	Performance management	Abysmal	On the job performance	No link to causation
10	Knowledge	For dealing with the present situation	Imparting to the next generation	Guidelines, manuals and checklists

Research Questions



T&D Practices in Preceding Ages

- **Hunter & Gatherer** Training and Development:
 - Learn Survival Skills
 - Education and training were indistinguishable
 - Learn acquiring necessities of life for self and family
 - Learning from family and close relations

T&D Practices in Preceding Ages

- **Agrarian Age** Training and Development:
 - Conscious imitation of experts
 - Merchant Guilds
 - Apprentice to master craftsman
 - Huge state-of-the-art universities
 - The education system was divided into two categories –
 - Literary or general and
 - Scientific or industrial education
 - Religion had control on education

T&D Practices in Preceding Ages

- **Industrial Age** Training and Development:
 - On the job training combined with vestibule schooling
 - Scientific training
 - Within the walls of the factory
 - Time bound task specific learning
 - Different Trainings for skilled, semi-skilled, and unskilled workforce

Research Questions

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SD

PD

T&D Practices in Information Age

- Evolving T&D Challenges
 - Attitudinal/Philosophical Changes
 - Technology, Changes, Learner and Trainer

T&D Practices in Information Age

- Training and Development Trends
 - Need Analysis Trends
 - Delivery Trends
 - Evaluation Trends
 - Follow-up Trends

Research Questions

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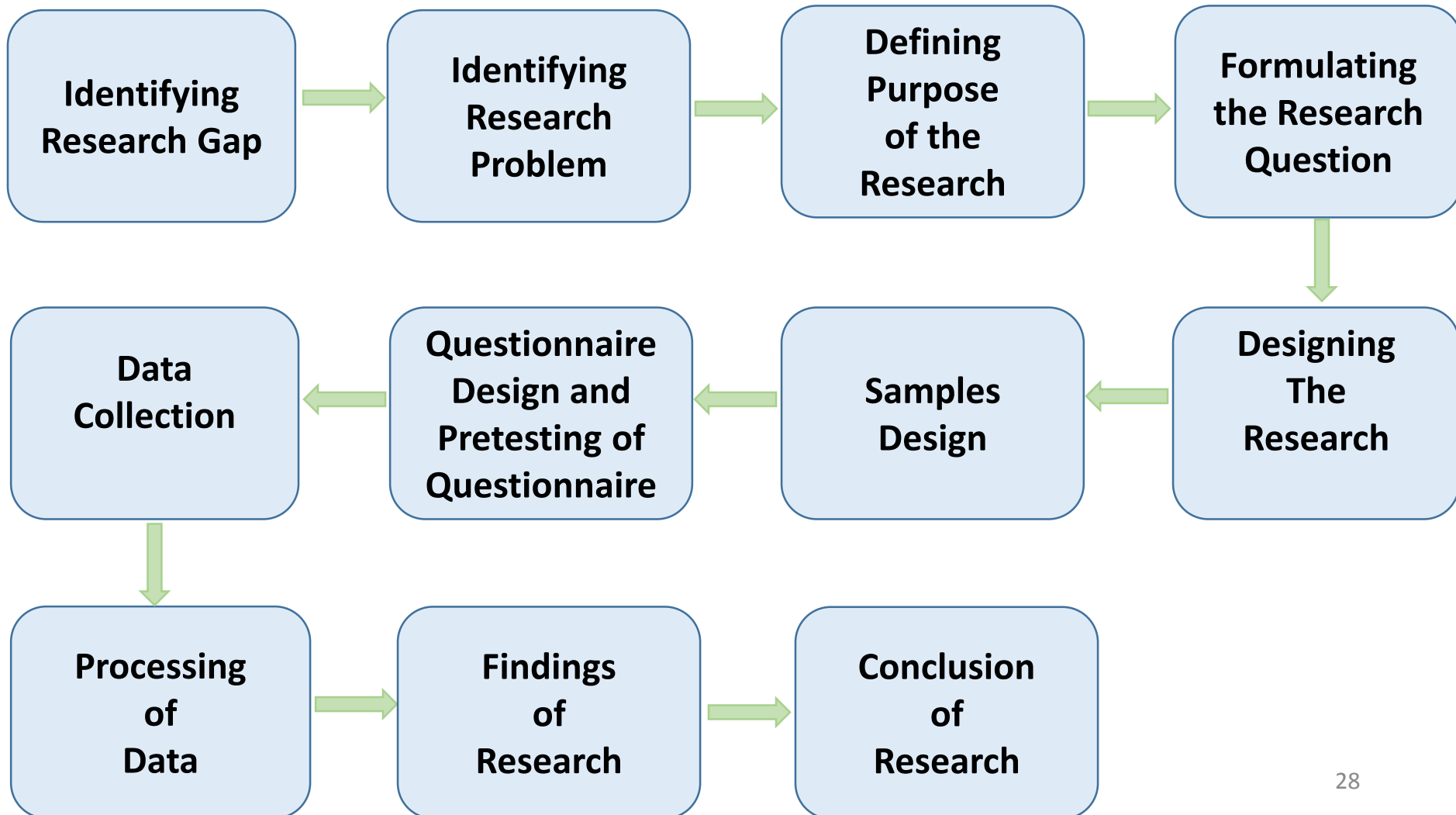
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Research Methodology

Three limitations:

- Restricting the study for the period of year **1995 to year 2015**.
- Restricting the study to Indian Automobile Industry.
- Restricting the understanding from the viewpoint of Training and Development Tools.

Research Methodology



Research Methodology

- Exploratory
- Descriptive
- Inductive
- Grounded Theory

Sample Design

- Non-probability
- Purposive (Judgment Sampling)
- Emergent
- Setting: Natural

Data Collection Tools

- Questionnaire
 - Printed
 - Online (SurveyMonkey, Google Form, Word, Pdf)
- Interviewing - formal and informal
- Face-to-face Interview/Talk
- Telephonic Interview/Talk
- Email and Social Media
- Observation
- Documents
- Audio, Video and Human – (Memo, notes)

Questionnaire Design and Pretesting

- Pretesting of Draft Questionnaire
- Administered to Fifteen Respondents
- Ascertain:
 - Respondents are able to understand the questions easily
 - Questionnaire is able to collect the expected data
 - Doesn't take much time to respondents in answering the questions
 - Questionnaire is able to fulfill the objective of the research
 - Each question is relevant in generating the required data

Questionnaire Design and Pretesting

- Final Questionnaire: Divided into Five Parts
 - First Part – Demographic Record
 - Second Part – Training Need Analysis
 - Third Part - Delivery of Training
 - Fourth Part - Appraisal of Training
 - Fifth Part - Follow-up of Training

Data Collection

- Data Collection
 - Companies Studied (Top three):
 - Tata Motors
 - Mahindra & Mahindra
 - Maruti Suzuki
 - Respondents:
 - Executives of training centers
 - Consultants
 - Trainers of training companies providing services to these organizations
 - Ten different geographic locations in the country
 - Size: 500
 - Time and Resources

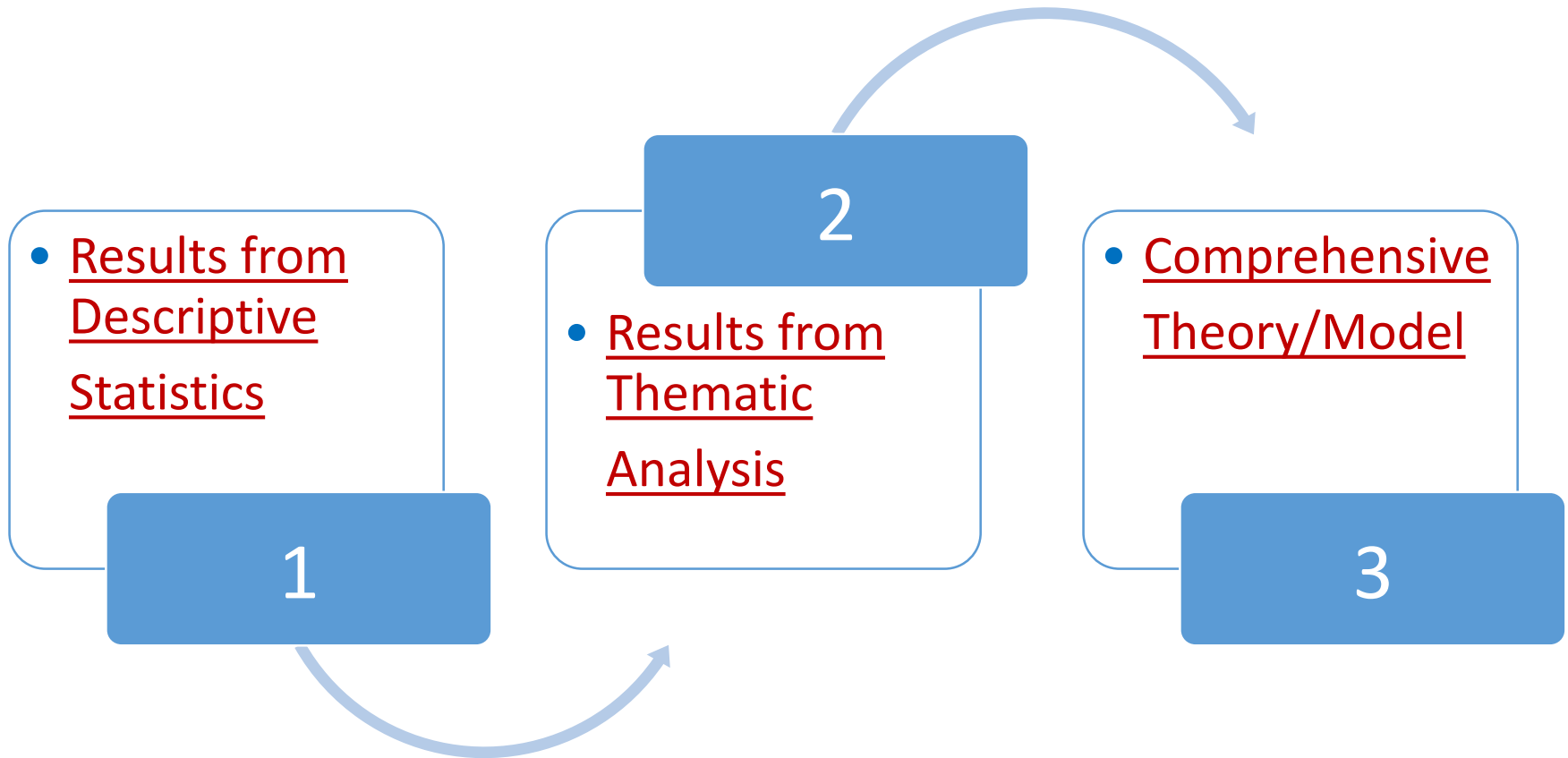
Validity and Reliability

- Validity:
 - Pretesting
 - Peer Evaluation
- Reliability:
 - Test-Retest
 - Triangulation
 - Saturation or redundancy
 - Inter-Rater Reliability

Data Analysis

- Descriptive Analysis
 - Outcome variables identified
 - Descriptive Statistics
 - Contingency RXC Tables
- Inductive Analysis
 - Open ended questions
 - Thematic analysis
 - Grounded Theory

Findings



Significance

1. Presents guidelines and benchmark in IA for:
 - A. Organizations to evaluate their position
 - B. Plan path to maintain their competitiveness
2. Insight for policy makers and strategic management
3. Insight for design and implementing training
4. Help extrapolating for future with the help of further studies

Significance

5. Contribution to scholarly knowledge
 - A. Defined T&D Practices
 - B. Compared T&D practices of preceding ages
 - C. Patterns in Training and Development Practices in the Information Age
6. Manufacturers and sellers of Training and Development Tools to find their position with the time

Significance

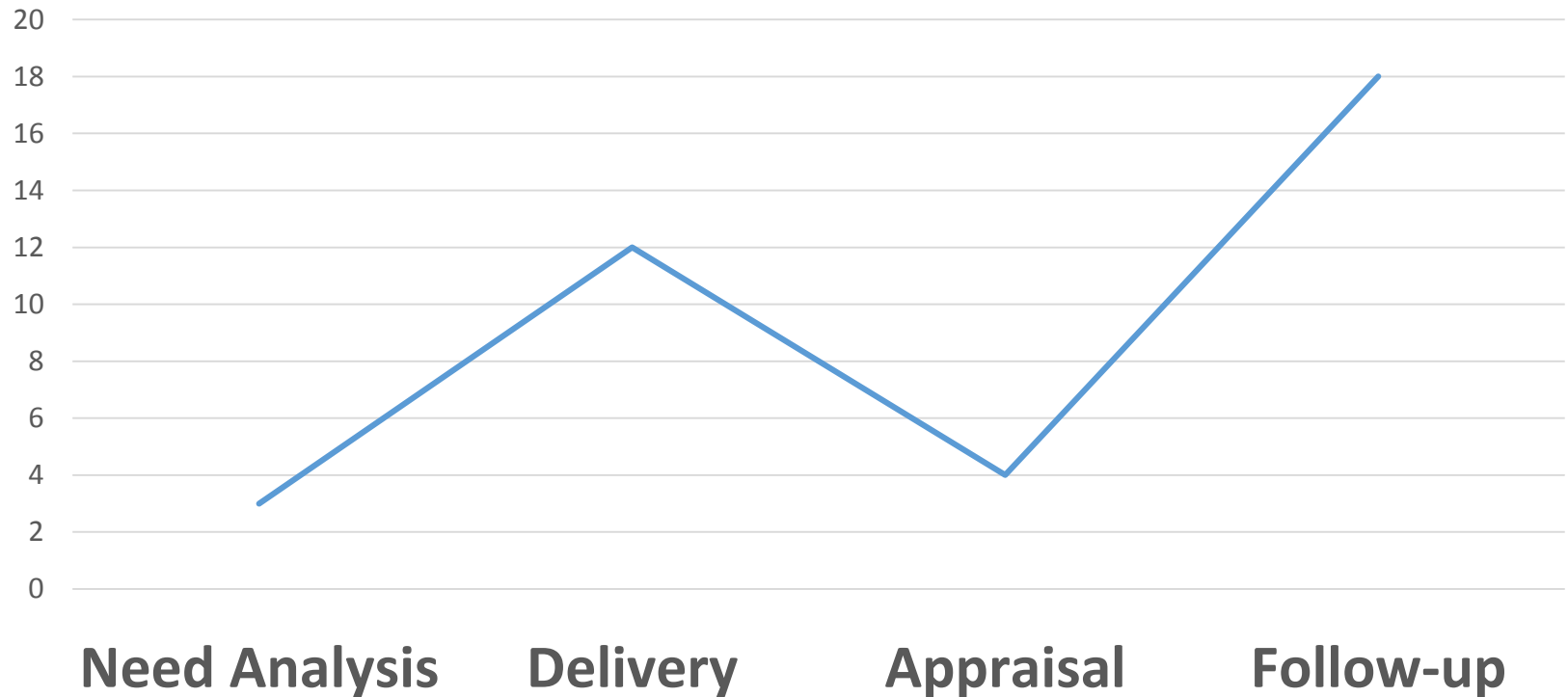
7. Guideline for trainer and trainee both
8. Presented Information Age training and development practices into five generations
9. Feature of each generation
10. Progression at all the four levels of training

Major Findings

- Tools evolved gradually at each stage of the training.
- Five generations of evolution.
- Technologies are replacing themselves.
- Adoption of the tools is growing.
- No single online tool is enough for all stages.
- Video streaming has highest momentum.
- The use of video rose till the year 2010 and stabilized.




Major Findings

Coverage of online Tools



Major Findings

Most Used Training Tools

	Need Analysis	Delivery	Appraisal	Follow-up
E-forms				
LMS				
Software				
Social Media				
Email				
Video Streaming				
Website				

Major Findings

- Most used training tools in all the four stages:
 - Email,
 - E-form and
 - Video Streaming

Limitations

1. Many More Dimensions - Methods, Techniques
2. More Industries
3. More Organizations
4. More Qualitative Rich Data Methods
5. Data has potential to be analyzed in many more ways
6. Interview and Note taking by researcher herself

Future Scope

1. Conclusions - natural guide to future research
2. Other Industries – Consolidation and Generalization
3. Other Dimensions to be explored
4. Mid or bottom size organizations – startups
5. The tools could be studied individually

Conclusion

- A milestone in the process of identification of current Training and Development Practices in the Information Age by the organizations.
- This will help understand the advances required in practice in designing and implementation of training to harness people.
- This will provide a new insight to the policy makers and strategic managers.



If we knew what it was we were doing, it would not be called research, would it?

- Albert Einstein

*Thank
you*



Training and Development Tools

1. Software
2. Audio
3. Video
4. Simulators
5. Satellite
6. Email
7. Virtual Reality
8. Projector
9. Instant Messaging
10. Virtual Classrooms
11. Websites
12. Smart Boards
13. Webcasting
14. Online classes
15. Learning Management Systems

Training and Development Tools

16. Web Portals

17. Audio Streaming

18. Mobile Device

19. Video Streaming

20. Digital Library

21. Online Chat

22. Screencasting

23. Electronic Forms

24. Social Media

25. Apps

Indian Automobile Industry

- Automobile Industry
- Indian Automobile Industry
- Training and Development Practices in Indian Automobile Industry

Automobile Industry

“Automobile industry is all those companies and activities involved in the manufacture of motor vehicles, including most components, such as engines and bodies, but excluding tires, batteries, and fuel”.

J. B. Rae

Indian Automobile Industry

- India is the fastest growing automobile market in the world after China.
- India is Asia's fourth largest exporter of passenger cars, behind Japan, South Korea, and Thailand.
- Indian automobile industry is forecasted to grow:
 - Privatization of ports,
 - Setting up of ultra mega power projects
 - Better roads and highways.

Indian Automobile Industry

Ranking of Indian Automobile Companies

The Economic Times

Et 500 Rank	Company	Revenue (CR)	PAT (CR)	MCAP (CR)	Assets (CR)
5	Tata Motors Ltd.	2,32,834	13991.02	155333.02	141453.53
17	Mahindra & Mahindra Ltd.	74874.20	4666.93	80990.65	69184.97
30	Maruti Suzuki India Ltd.	45281.10	2852.90	81570.19	23961.00
49	Hero MotoCorp Ltd.	25721.85	2109.08	51411.98	5982.22
56	Bajaj Auto Ltd.	20840.10	3380.28	63010.32	10435.17
104	Ashok Leyland Ltd.	10929.39	29.38	10086.47	13277.66
120	Sundaram Clayton Ltd.	9412.32	141.23	2596.84	2710.16
135	TVS Motor Company Ltd.	8428.20	186.30	8317.25	1951.12
162	Eicher Motors Ltd.	6905.09	393.94	25418.66	3252.42

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Training and Development Practices in Indian Automobile Industry

- Open programs- Training calendars
- Customized programs - targeted group
- Leadership development programs - leaders across the group
- Four Types of modules
 - Technical
 - Commercial
 - Human resource
 - Product module sessions

Training and Development Practices in Indian Automobile Industry

- Highest weight on digital training
 - Centralized studio at Maruti Suzuki's
 - Ninety percent of TMTC's training has gone online
- Academic faculty as well as business leaders
- Emphasis on learning through experience
- Training of globally scattered team

Training and Development Practices in Indian Automobile Industry

- Programs for:
 - New entrants
 - Middle managers
 - Senior managers
 - Leaders
- Array of methods ranging from classroom lecture to online self-paced programs
- From long spanning programs to smaller sessions
- Increased use of technology

Training and Development Practices in Indian Automobile Industry

- Course formats are crisp, shorter and smarter
- Multi-cultural classroom
- Assessment by small exercises like quiz and role plays
- Evaluation by feedback system
- Digital platform is used in ample for follow up
- Functional Alumni club

Principles

- The fundamental sources that serve as the basis of finding direction of training and development programs
- Five principles of sound training (Adams, 2000):
 - Addressing the problem
 - The adult learners must relate to training
 - Training must meet an immediate need of the learner
 - The adult learner should be involved in setting learning goals
 - Training should involve workers to the point of using their expertise

Standards

Training and development standards are models for the measurement and comparative evaluation of T&D programs for its effectiveness and efficiency.

ISO 10015

OHSAS

TQM

Policies

Training and development policies are statement of intent that turns subjective principles and standards into objective guidelines to be followed.

Concepts

Training and development concepts are clearly stated ideas around which the training and development programs are organized.

Tools

Training and development tools are the means or help to perform the training and development operations.

Methods

Training and development methods are established systematic process of achieving certain ends with accuracy and efficiency, in an ordered sequence of fixed steps.

Techniques

Training and development techniques are the skillful or efficient ways of carrying out training and development methods.

Ideas

While applying training and development methods and techniques, idea is an intentional opinion or certitude acting as a trick of success for the unique set of trainee, trainer and process.

Procedures

- A training procedure is a sequence of step-by-step activities involved in the delivery of a training.
- From start to end, the training procedure has to be followed in the same order to correctly impart the training.

Rules

- Training rules assert demeanor of training within certain scope of regulation.
- These rules control or influence the conduct of the training program.

Political/State Trends

- Internet – a lawless and leaderless space
- Virtual statehood and cyber wars
- Villager and metropolis can be same productive
- Participatory culture
- Collaborations based on ideology and religious morals (not the physical distance and economy)
- Most important resources as intangible
- After China and India, Facebook is third with largest population

Business Trends

- Every employee is leader
- Teams are self-organizing and self-managing
- Capital and cost is no longer a barrier
- One's network is his key-currency
- Personal branding is business
- Involves low-opportunity cost as one starts very early
- Digital marketing, procurement and distribution

Economic Trends

- People are assets not liabilities
- A worldwide base of skilled labor
- Information is lifeblood
- Place and time independent transactions
- Global real-time capital flowing freely
- Adaptable, innovative and responsive to ICT businesses

Technology & Communication Trends

- Computer-supported cooperative work
- What was once science fiction is quickly becoming science fact
- Robots are easing production process
- Designs have moved from drawing boards to computers
- 3D Printing
- Web 2.0

Transportation Trends

- Telepresence
- GPS (Global Positioning System)
- Mobile communication systems
- Independent of fossil fuel - frictionless vehicles
- Automatic and high-speed vehicles
- Reduced carbon footprint

People, Home and Family Trends

- Companies need a radically different kind of workforce
- Knowledge workers – Autonomic and value reason
- Empowered and involved
- 29% of millennial find love through Facebook
- 33% are dumped via wall posts or text messages
- Parents spend more time with their children
- People need fruitful engagements

Attitudinal/Philosophical Changes

- Demassification and decentralization
- Intermittent in place of linear
- Home-based learning
- Adults seek education
- Choice in place of conform
- Collaboration in place of competition
- Personal preferences in place of societal preferences
- Upward learning curves in place of falling curves
- Computer – a great God of information not a monster

Need Analysis Trends

- Specific to each individual
- Multidisciplinary perspective - 5 to 6 careers
- Needs of individual not Organization
- Need analysis in global context
- Need assessment on hands-on work

Delivery Trends

- Self-paced e-learning modules
- Massive Open Online Course
- Real-time webinars instead of face-to-face training
- Crowdsourcing and sharing materials across digital platforms
- Provision for immediate knowledge

Evaluation Trends

- Focus is to measure the transfer of learning
- Stakeholder based
- Resource Sensitive
- Takes a system-wide approach
- Takes account of time
- Flexible

Follow-up Trends

- Traditional methods enhanced on digital platform
- Blogs, forums, twitter accounts, Facebook pages
- Audio, video and small animations
- Online appreciation

Tech, Changes, Learner & Trainer

- ICT has led to an increase in the demand for skills
- Employment relocating from clerical workers to knowledge work
- ICT supports knowledge environment, life-long, quick, and customized learning
- The ocean of available knowledge in
 - Preferred format
 - No bondage of time and scale
- Sincere and result-oriented digital learners

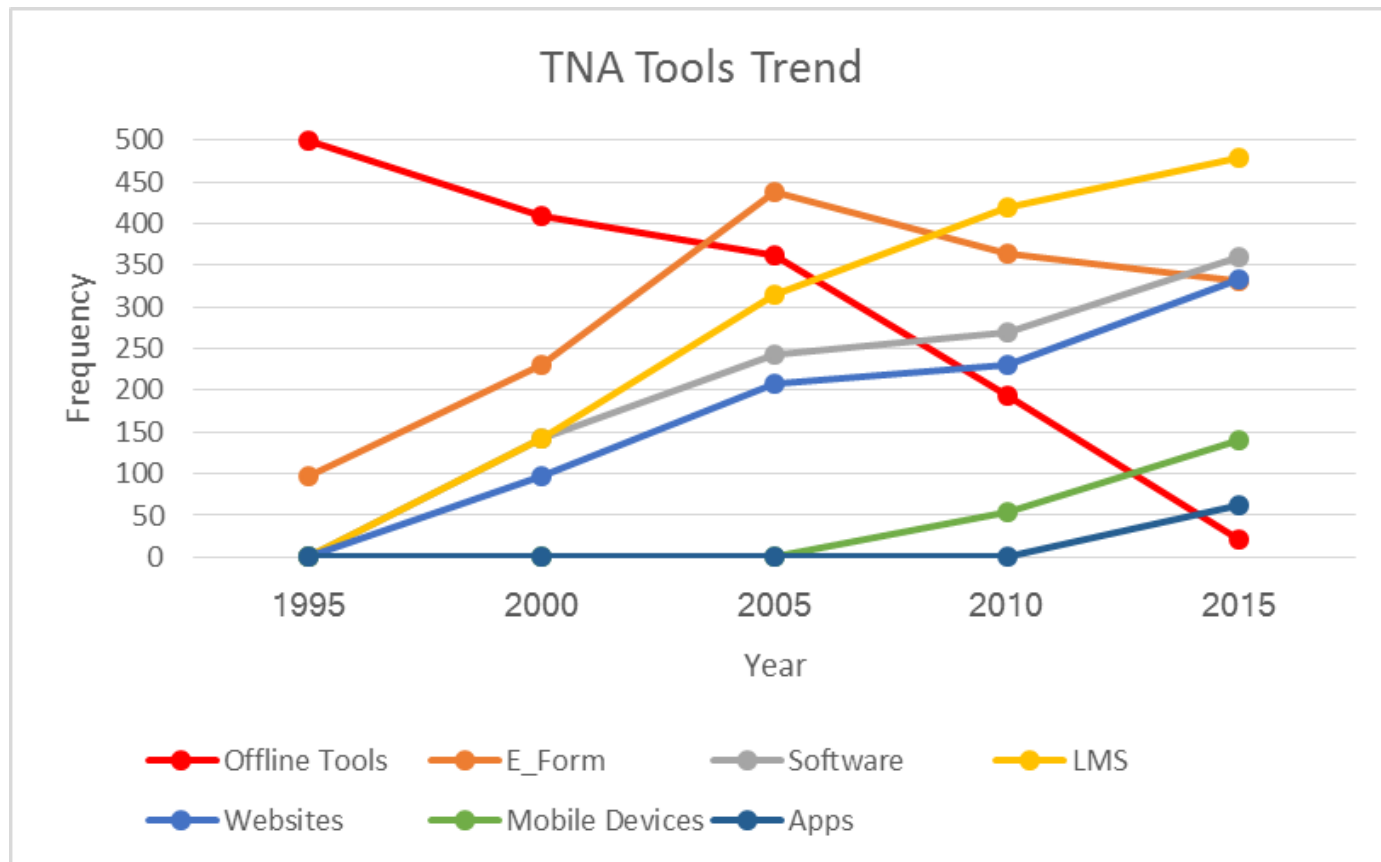
Tech, Changes, Learner & Trainer

- Choice on the basis of output
- Individuals are independent learners
- Line between learner and expert is blurring
- Individual will outlive the organization
- The crucial job of the 21st century instructional designer is to:
 - Filter knowledge
 - Curate it and
 - Organize it

Results from Descriptive Statistics

- Training Need Analysis
- Delivery of Training
- Appraisal of Training
- Follow-up of Training

Training Need Analysis



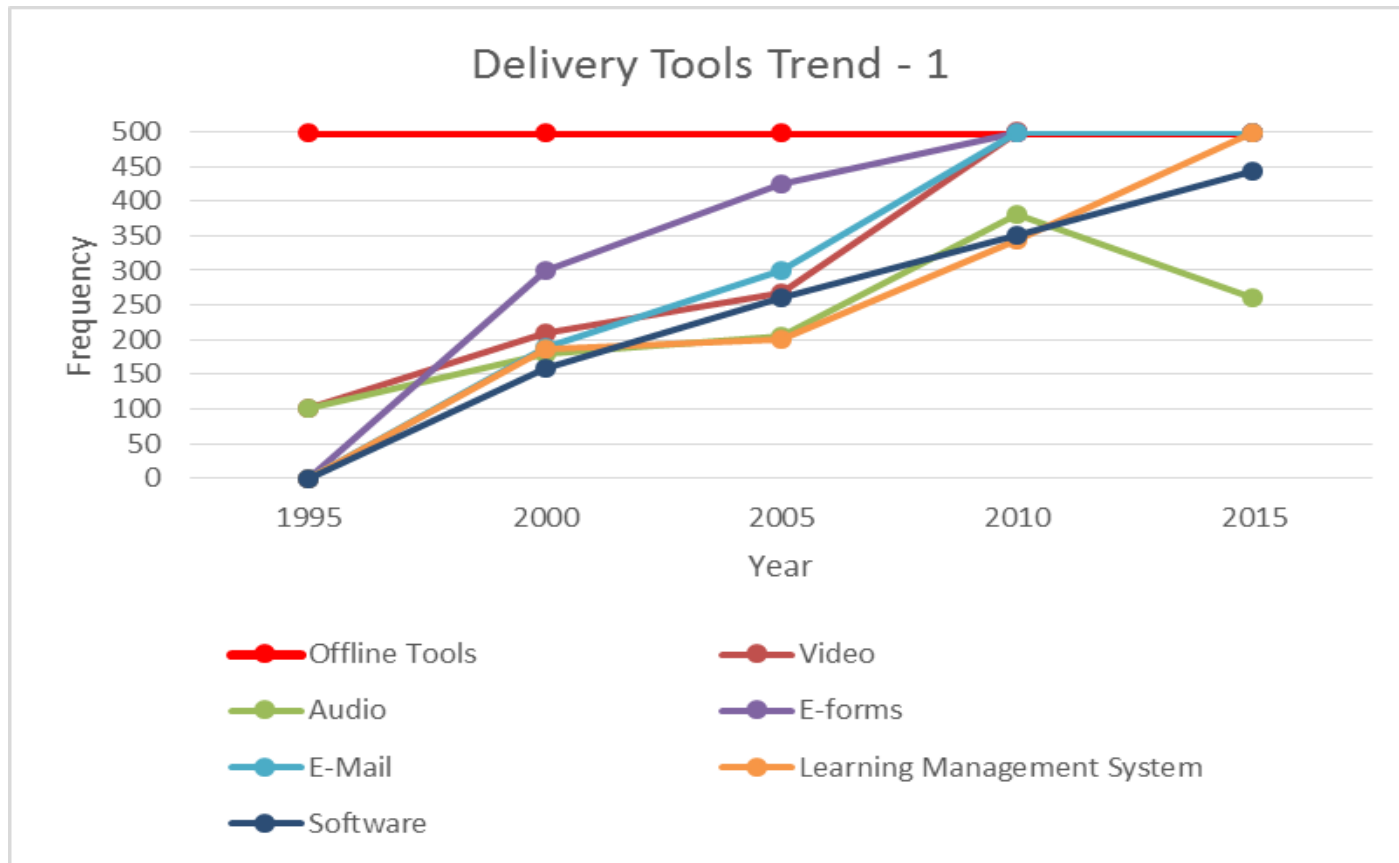
Training Need Analysis

- Offline tools are moving downwards
- Online tools are moving in upwards direction
- Online tools are not increasing solitarily but are eating on offline tools

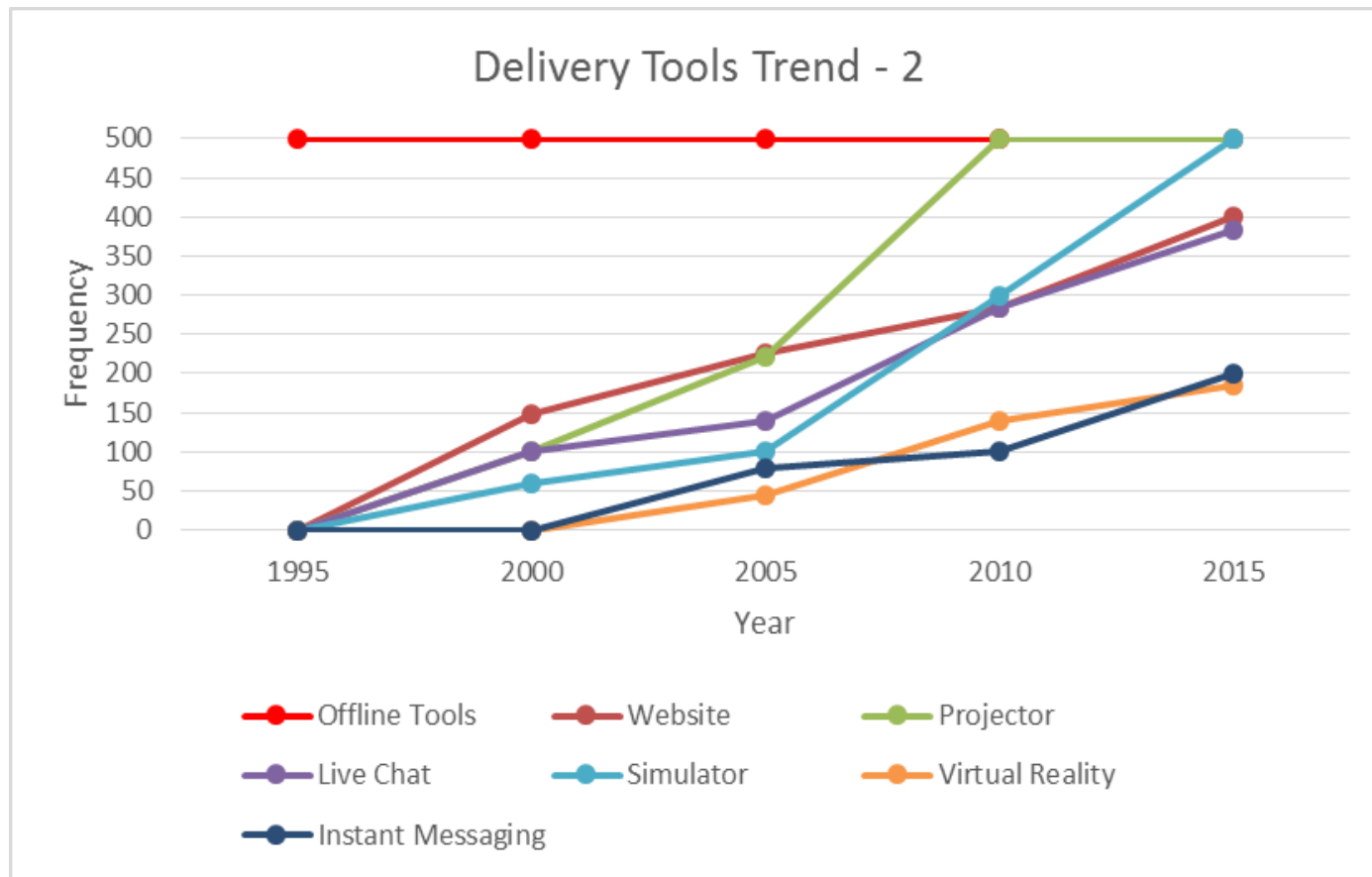
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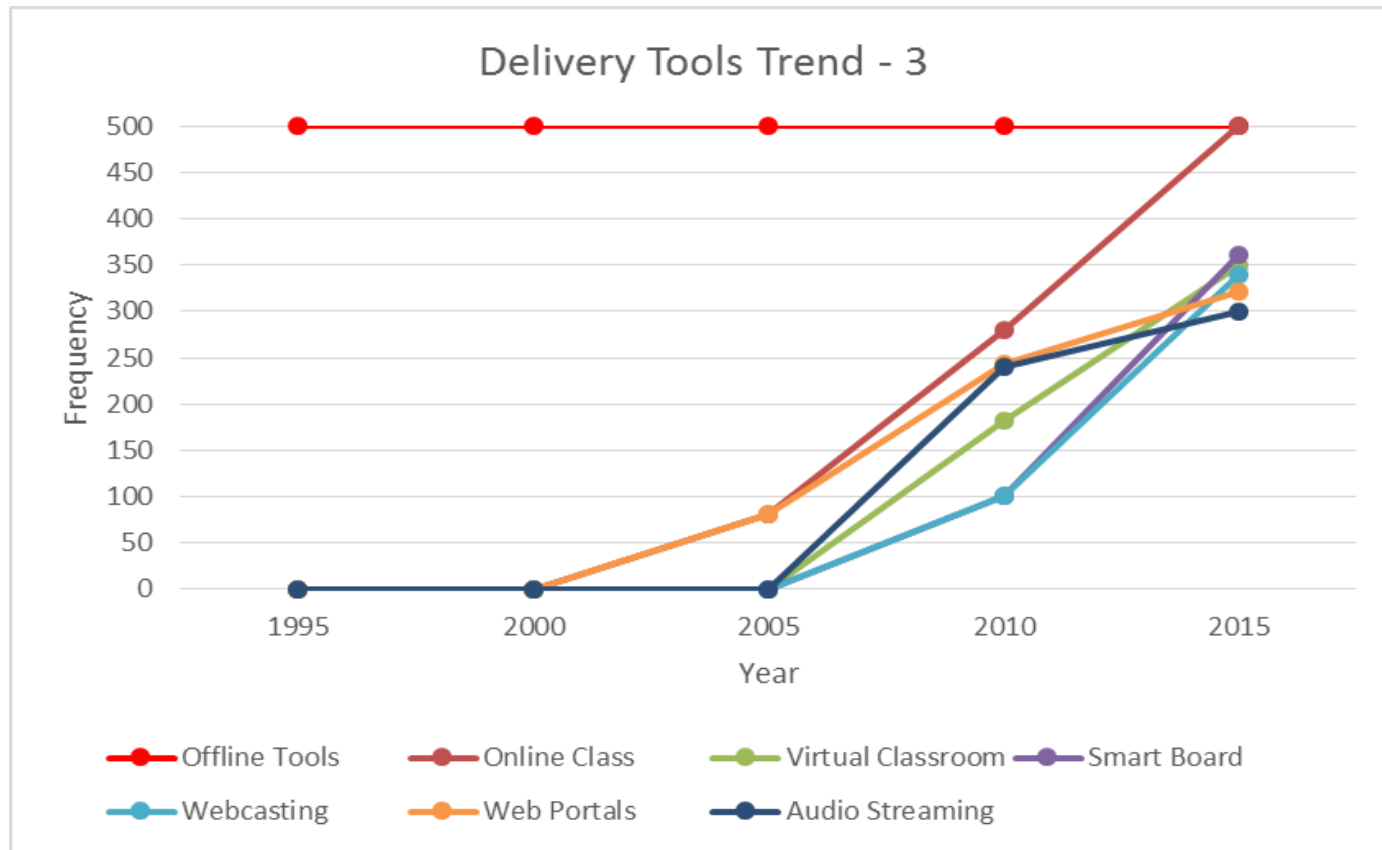
Delivery of Training



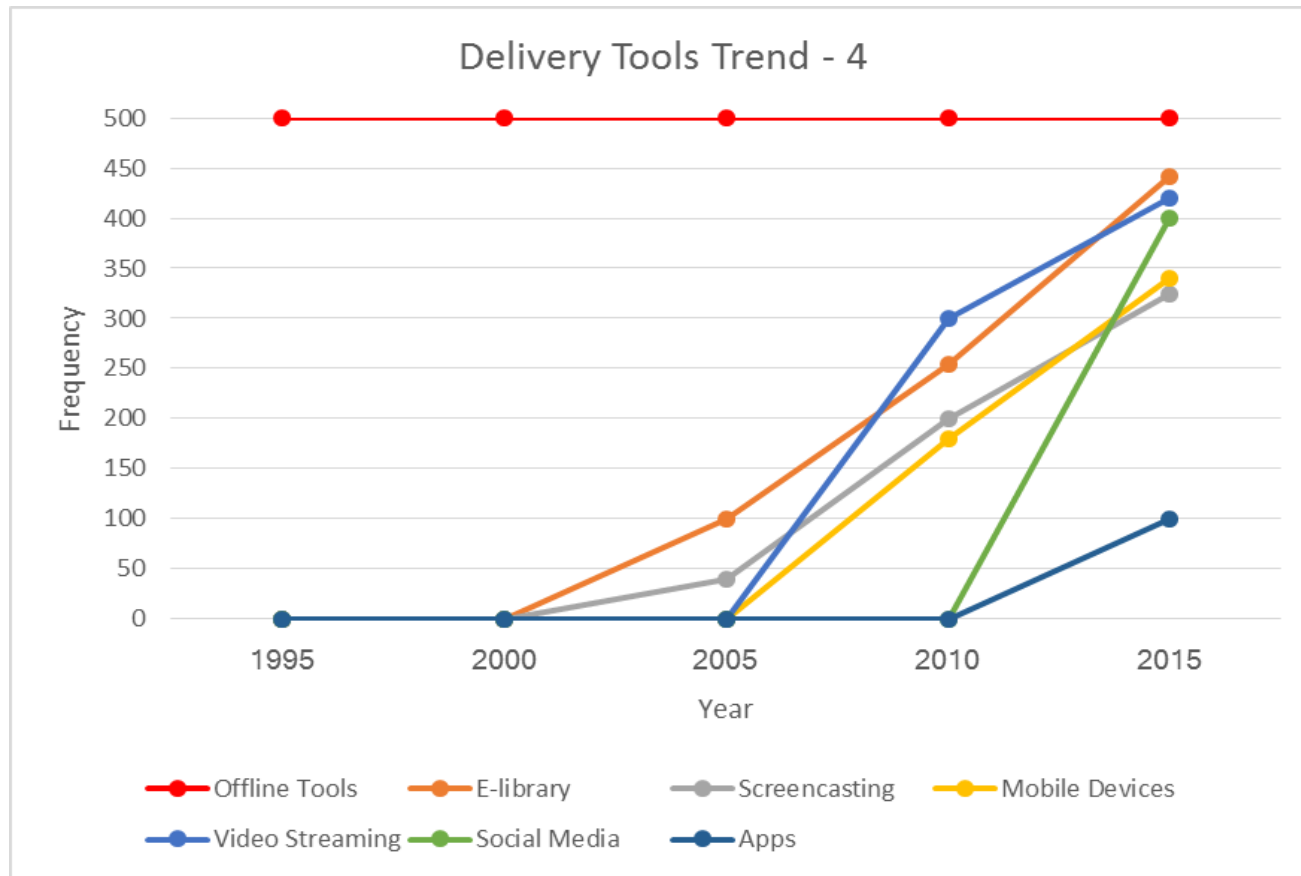
Delivery of Training



Delivery of Training



Delivery of Training



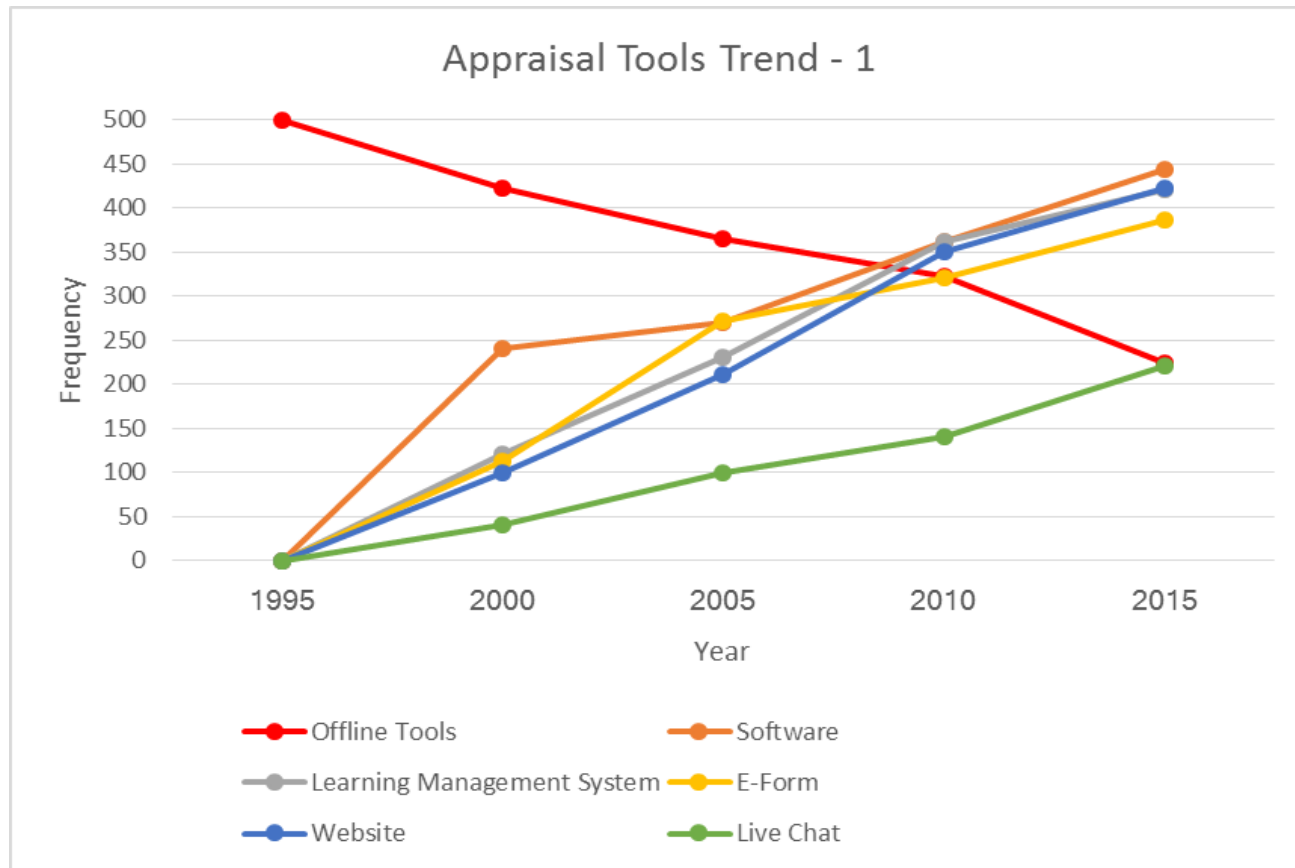
Delivery of Training

- The average positive response for offline tools is 100% throughout
- Online tools together make an average positive response of 52.74%

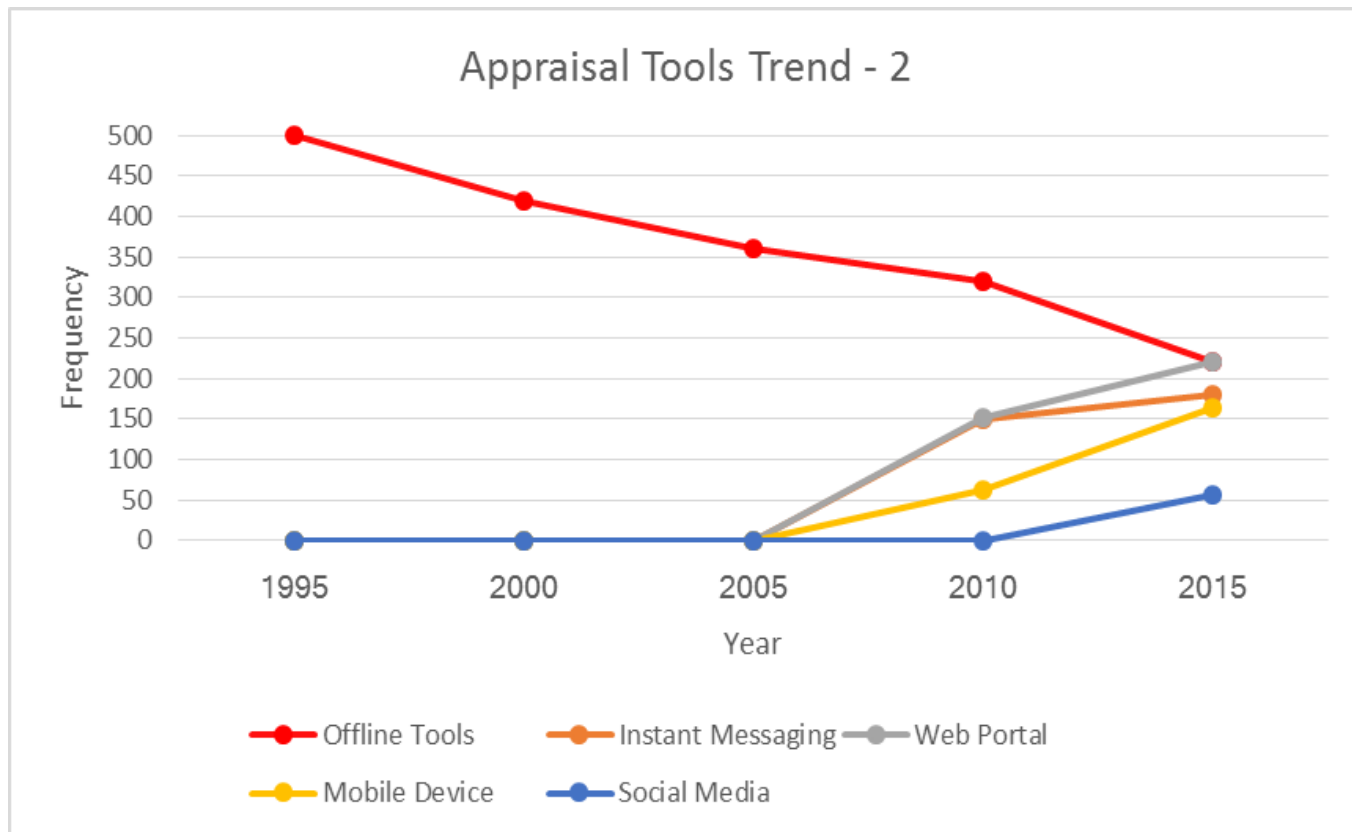
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Appraisal of Training



Appraisal of Training



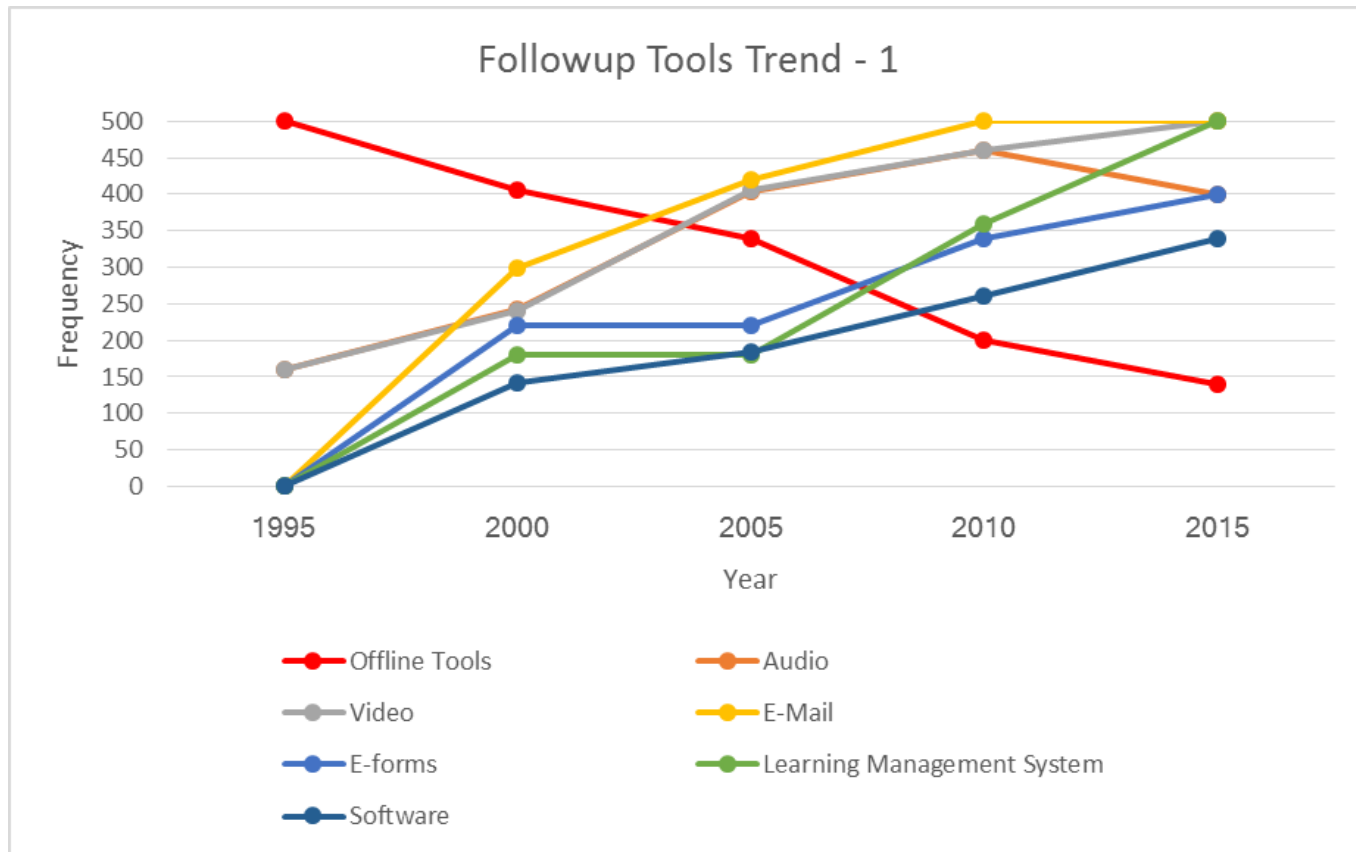
Appraisal of Training

- No online tool booked negative score
- The use of online tools started late
- The use of online tools moving upwards
- In the due course of time, the use of offline tools declined by 55.2%, from 100% in the year 1995 to 44.8% in the year 2015
- The use of online tools progressed from 0% to 55.8% in the year 2015

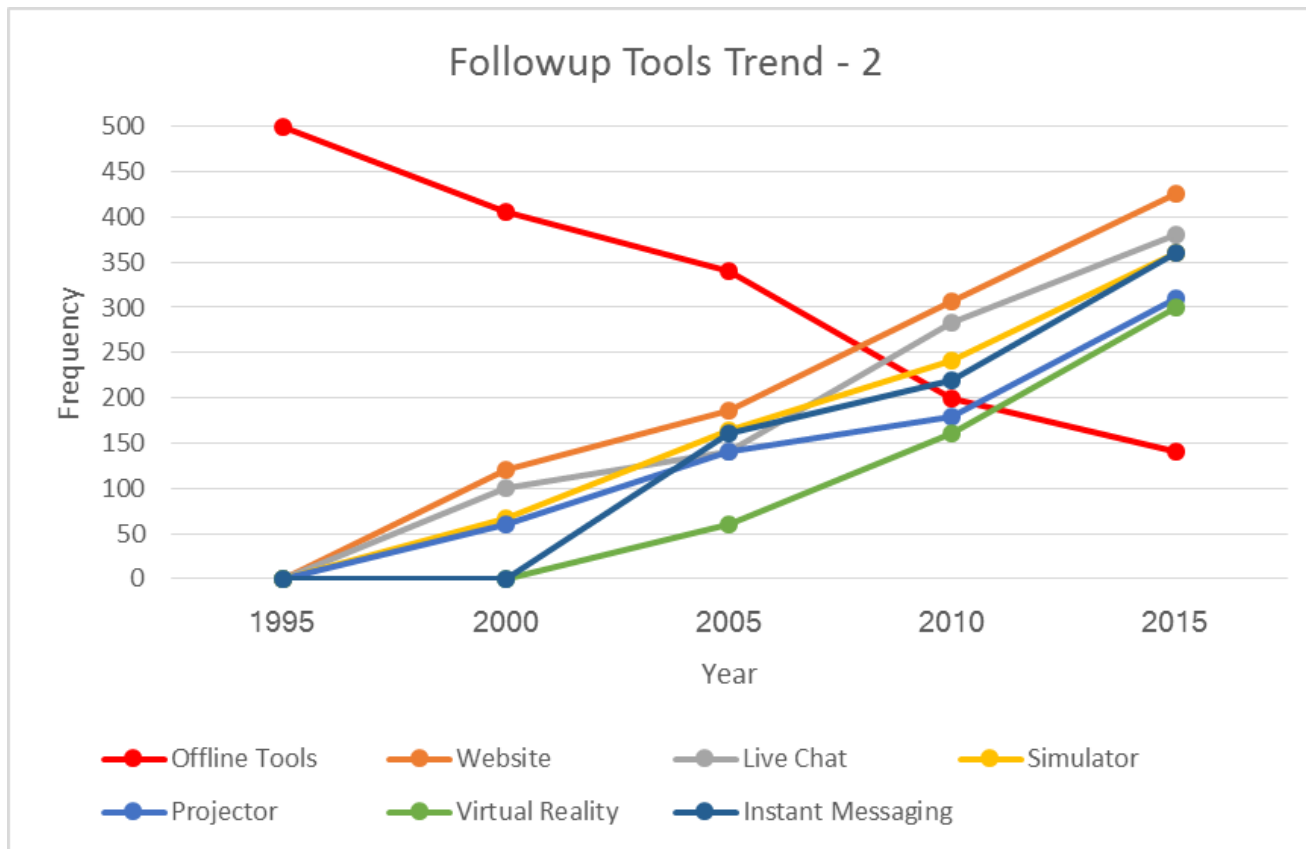
Results from Descriptive Statistics

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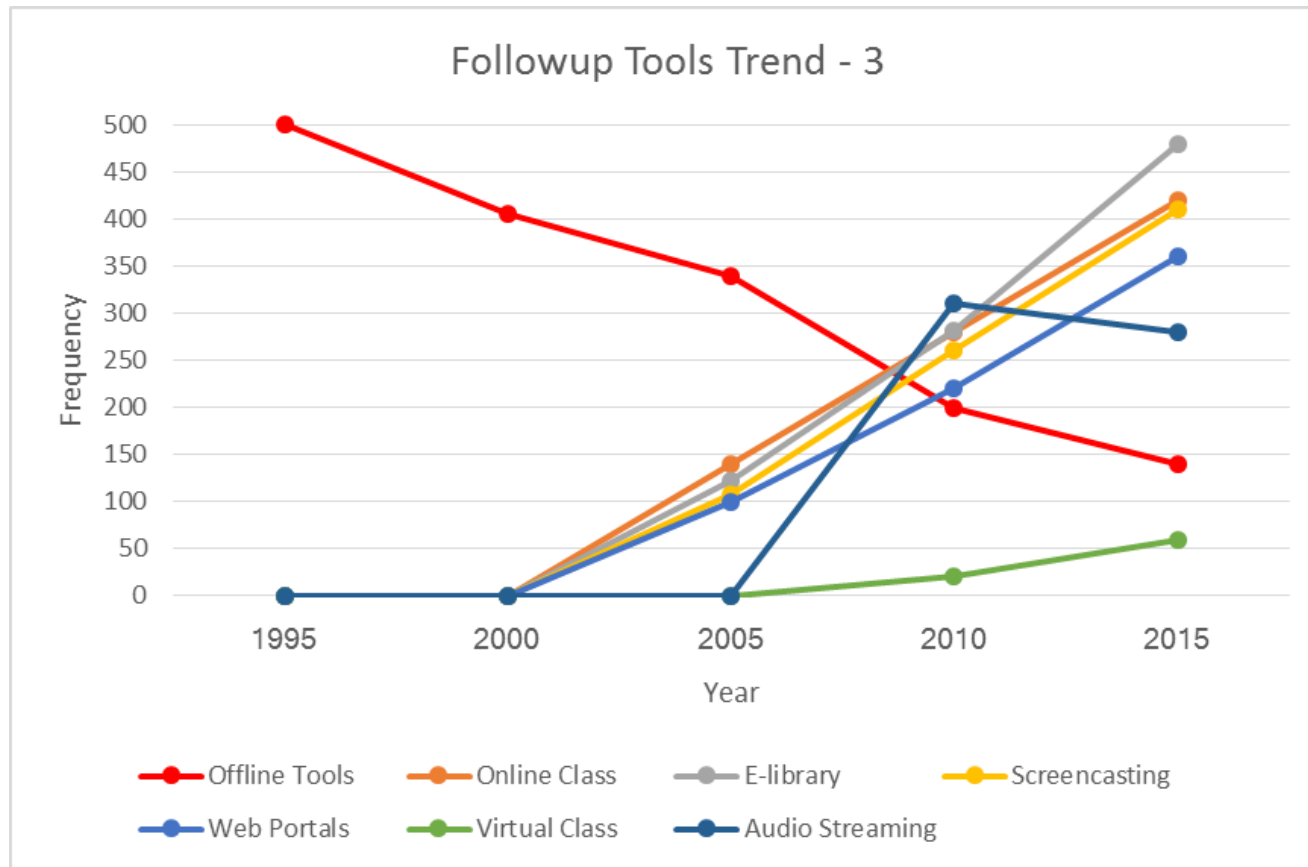
Follow-up of Training



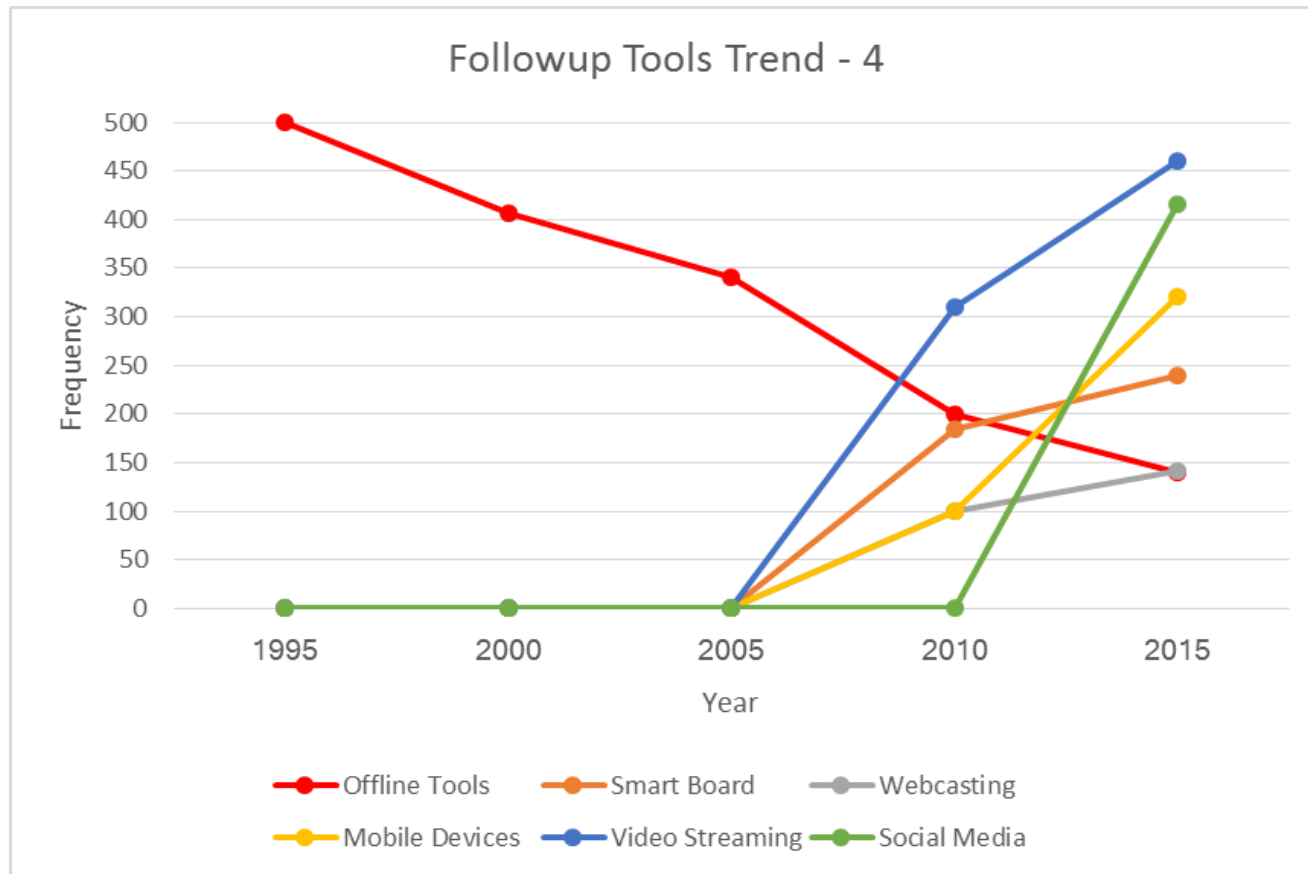
Follow-up of Training



Follow-up of Training



Follow-up of Training



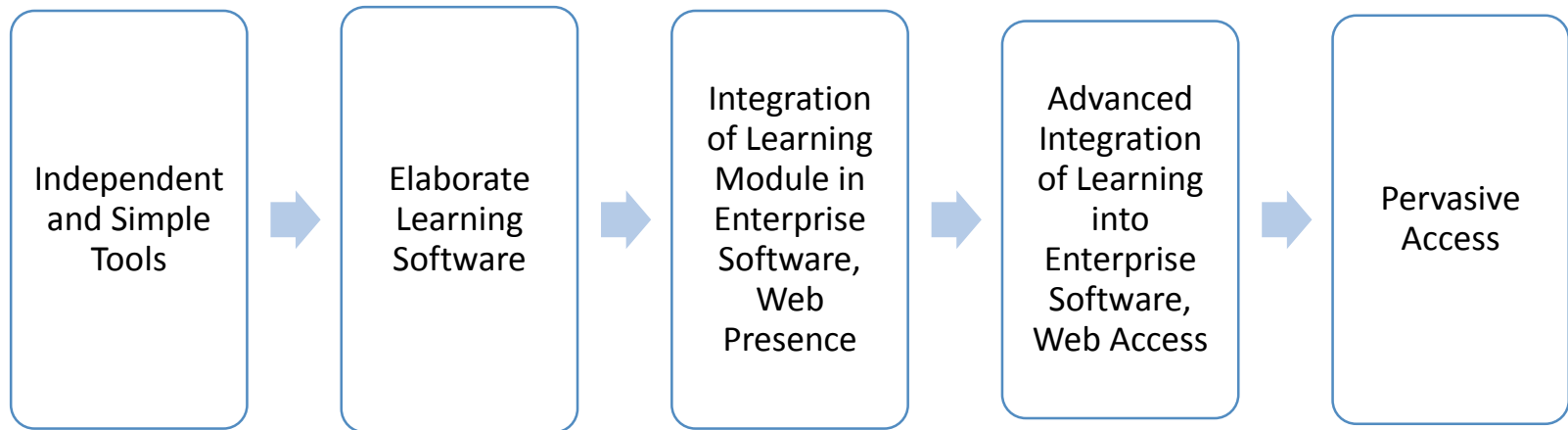
Follow-up of Training

- In the year 1995, only two online tools
- In the year 2000, eight new online tools
- In the year 2005, six new online tools
- In the year 2010, six new online tools
- In the year 2015, one new tool

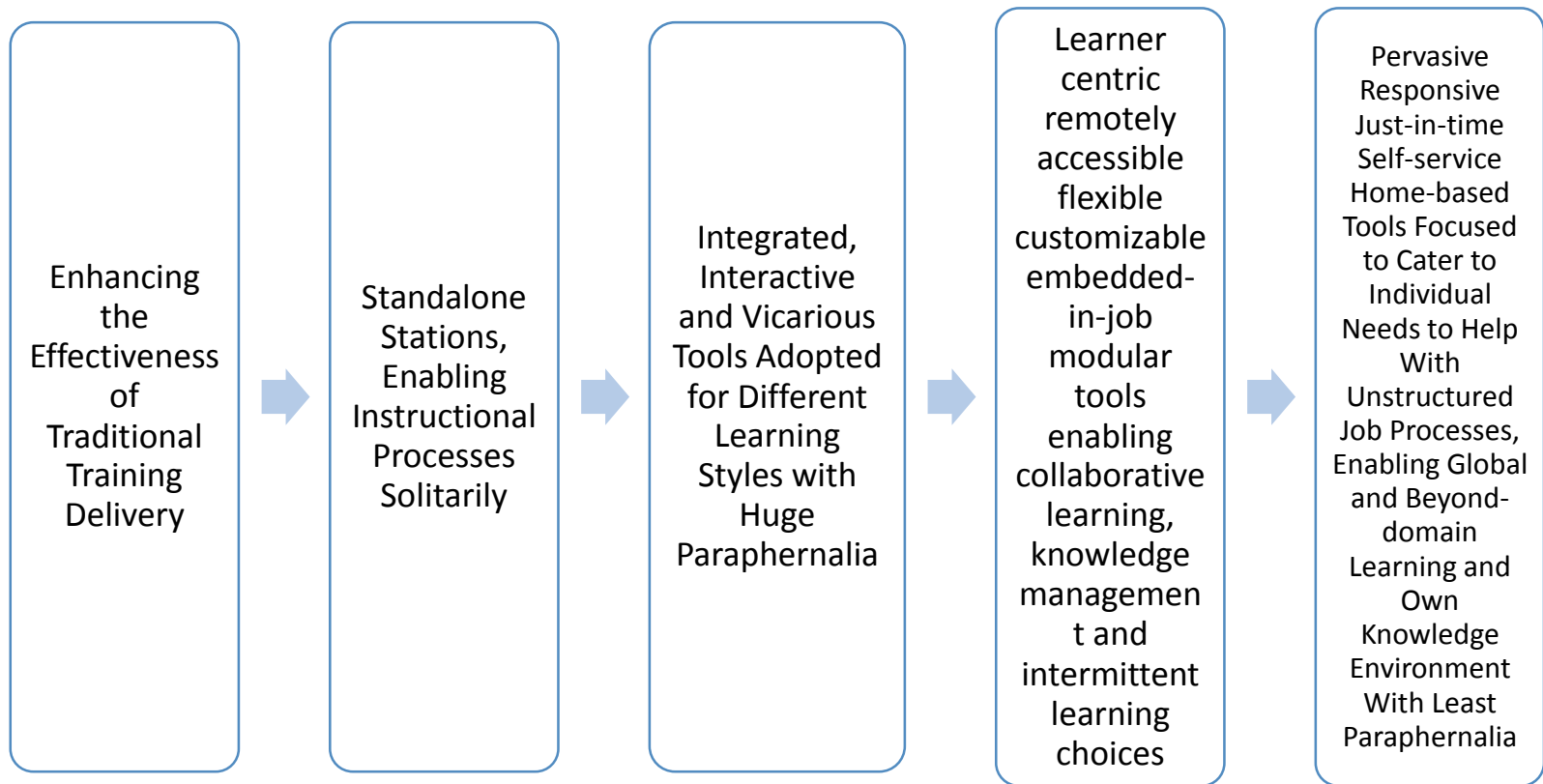
Results from Thematic Analysis

- Training Need Analysis
- Delivery of Training
- Appraisal of Training
- Follow-up of Training

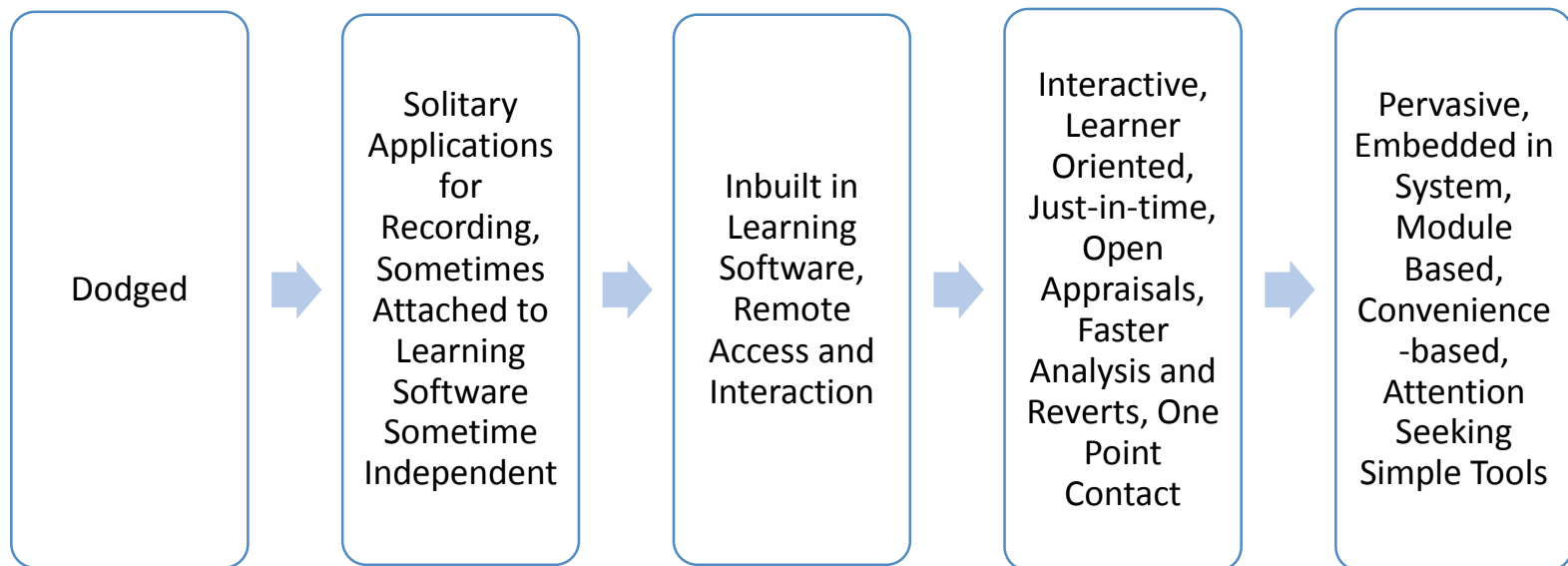
Training Need Analysis



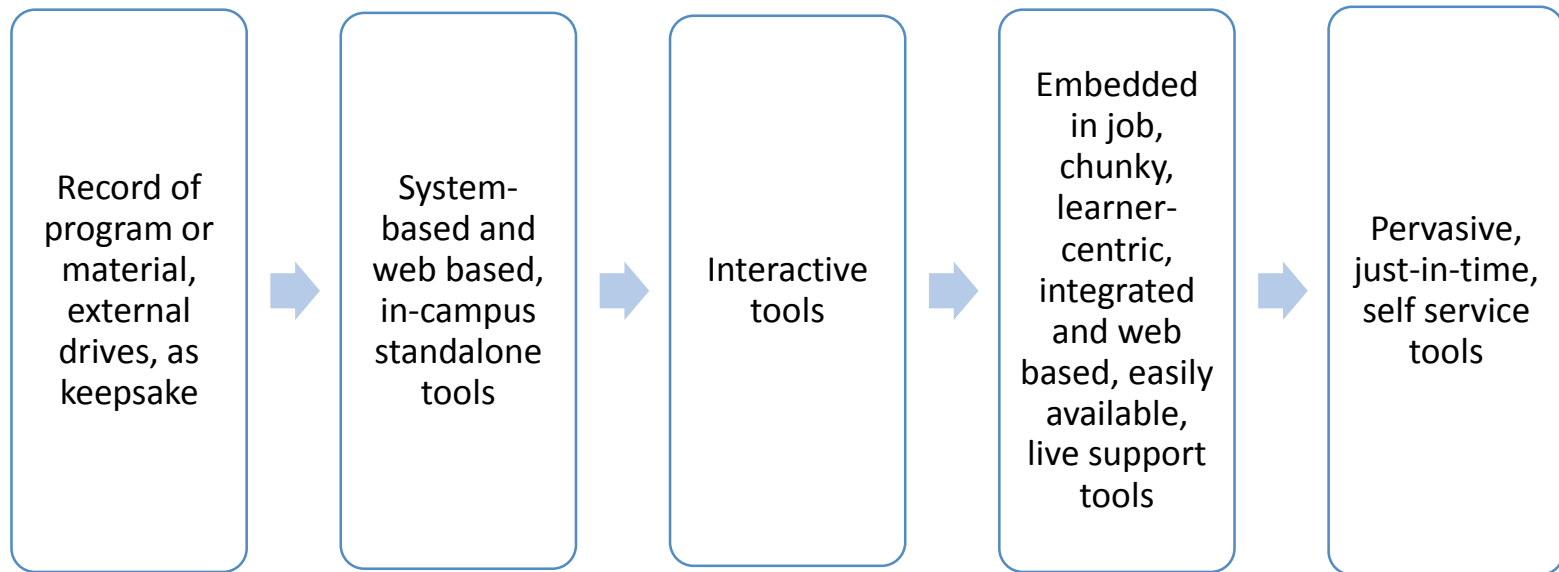
Delivery of Training



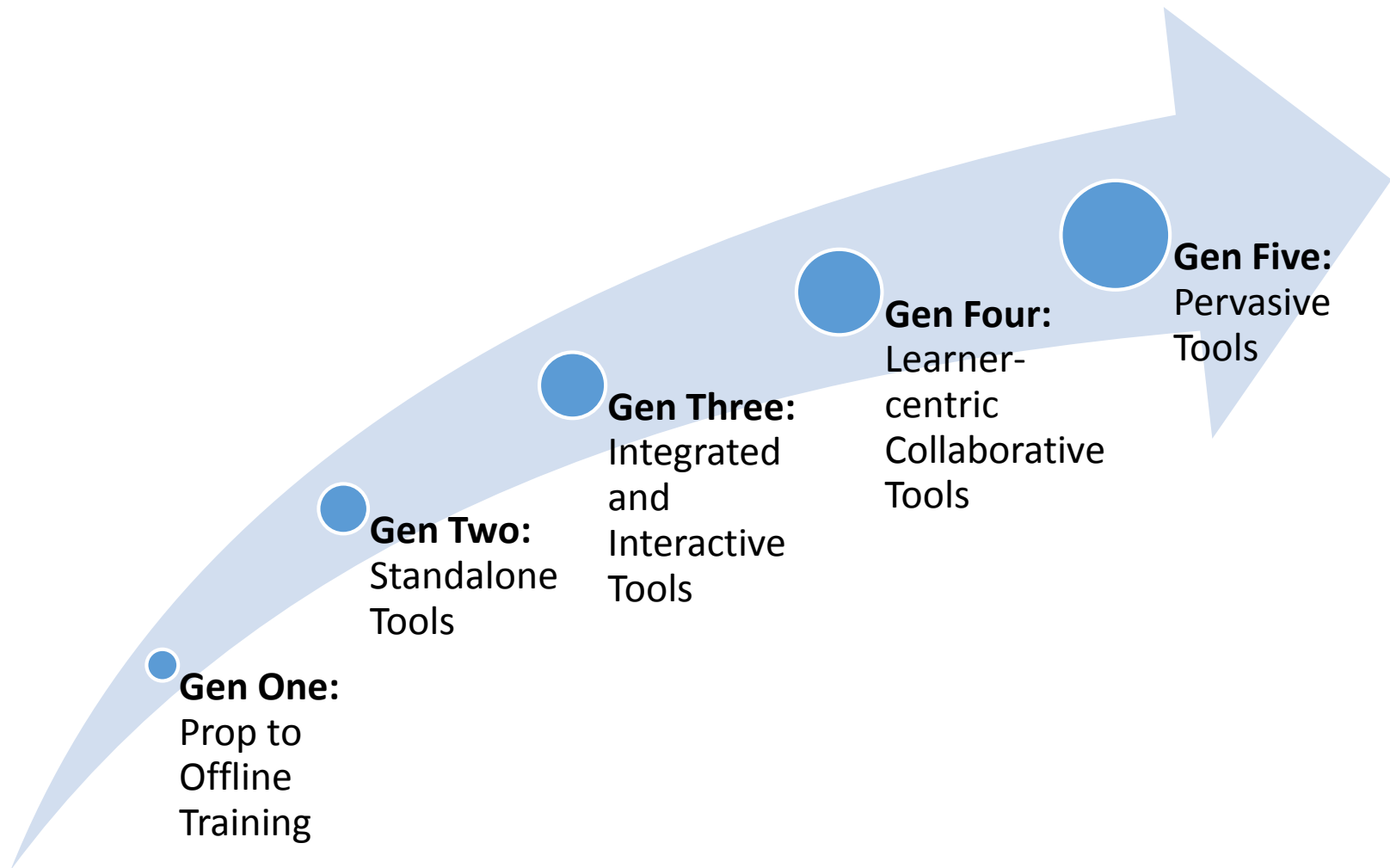
Appraisal of Training



Follow up of Training



Progression of T&D Tools in Five Gen



Progression of T&D Tools in Five Gen



Gen 1 – Prop to Offline Training

Highlights

- External prop to the then-existing offline training systems
- Starting of online tools
- Greater effectiveness
- Tools

Progression of T&D Tools in Five Gen



Gen 2 – Standalone

Highlights

- Time of standalone tools
- Learning software
- Advanced learning software delivering learning process solitarily
- Tools

Progression of T&D Tools in Five Gen



Gen 3 – Integrtd and Interactive

Highlights

- Era of integrated and interactive tools
- Learning modules integrated into the enterprise software
- TNA tools used in the generation 2, booked double positive responses
- Increased use of web
- Tools

Progression of T&D Tools in Five Gen



Gen 4 – Learner-cent & Collabor

Highlights

- Learner-centric collaborative tools
- Flexible and modular interface
- The learning systems - advance integrated into the enterprise software
- Platform for career management
- Learner centric and remotely accessible tools
- Chunky and easily available tools
- Tools

Progression of T&D Tools in Five Gen



Gen 5 - Pervasive

Highlights

- Emergence of pervasive tools
- Embedded in the system
- Cut down of paraphernalia
- Simple, self-service, home based tools
- Catering to individual needs and help them with unstructured processes
- Enable learning beyond the domain
- Tools

Training and Development Practices

Odoriferous of Master slave relationship	Chartered Institute of Personnel Development; Rosemary Harrison (2005)
Learning and Development underscores training's dual aim	Sugrue, Brenda (2005)
Methods used by employers to give employees the knowledge and skills they need to perform their jobs.	Dessler, Gary & Varkkey, Biju (2011)
Training consists of planned programme designed to improve performance at the individual, group, and /or organizational levels.	Cascio, Wayne F. (1995)

Training and Development Practices

Provision of learning, development and training opportunities in order to improve individual, team and organizational performance.”	Armstrong (2009)
Development means growth of an individual in all respects	Malhotra and Phull (n.d.)
Training and development encompasses three main activities, namely- training, education, and development.	Thomas, Pat & Noreen (1995); Patrick & Bruce (2000); Rosemary (2005)
The process of being taught how to do something.	Ivanovic and Collin (2003)

Training Need Analysis Practices

- Observation
- Interview
- Questionnaires/Survey
- Job Description
- Gap Analysis
- Performance Appraisal
- Focus Group

Contd...

Training Need Analysis Practices

- Competency Mapping and Assessment Centers
- Advisory Committee
- Critical Incidents
- Test
- Problem Solving Conference
- Recommendation of Senior
- Review of Documents on Existing Training

Training Delivery Practices

- Lecture/Discussion
- Demonstration
- Games and Simulation
- Brainstorming
- Storytelling
- Workshop
- Field trip

Training Appraisal Practices

- Observation
- Interview
- Feedback
- Performance appraisal
- Benchmarking
- Cost-benefit Analysis
- Data mining
- Factor analysis

Training Follow Up Practices

- Orientation program
- Small reunion meets
- Quizzes
- Making groups/clubs
- E-mail/Letters
- Praise and motivation
- Phone/SMS
- Stationary/gift/Memento
- Assigning Voluntary Services
- Social Media

Gen 1 – Prop to Offline Training

Stage-wise Tools

- **Need Analysis:**
 1. e-Form
- **Delivery:**
 1. Audio and Video
- **Appraisal:**
 1. No online tools
- **Follow-up:**
 1. Audio and Video

Gen 2 – Standalone

Stage-wise Tools

- **Need Analysis:**

1. Software
2. Learning Management System
3. Website

Gen 2 – Standalone

Stage-wise Tools

- **Delivery:**

1. e-Form
2. Email
3. Learning Management System
4. Software
5. Website
6. Projector
7. Live Chat
8. Simulator

Gen 2 – Standalone

Stage-wise Tools

- **Appraisal:**
 1. Software
 2. Learning Management System
 3. e-Form
 4. Website
 5. Live Chat

Gen 2 – Standalone

Stage-wise Tools

- **Follow-up:**

1. Email
2. e-Form
3. Learning Management System
4. Software
5. Website
6. Live Chat
7. Simulator
8. Projector

Gen 3 – Integrated and Interactive

Stage-wise Tools

- **Need Analysis:**

1. Not new
2. Quantum of existing one's increased

- **Delivery:**

1. Instant Messaging
2. Online Class
3. Web Portal
4. Virtual Reality
5. Screencasting

Gen 3 – Integrated and Interactive

Stage-wise Tools

- **Appraisal:**

1. Not new
2. Increased quantum

- **Follow-up:**

1. Virtual Reality
2. Instant Messaging
3. e-Library
4. Web Portal
5. Screencasting
6. Virtual Reality

Gen 4 – Learner-centric & Collaborative

Stage-wise Tools

- **Need Analysis:**

1. Mobile devices

- **Delivery:**

1. Virtual Class
2. Mobile Device
3. Audio Streaming
4. Video Streaming
5. Smart Board
6. Webcasting

Gen 4 – Learner-centric & Collaborative

Stage-wise Tools

- **Appraisal:**

1. Instant Messaging
2. Web Portal
3. Mobile Device

- **Follow-up:**

1. Virtual Class
2. Smart Board
3. Webcasting
4. Audio Streaming
5. Video Streaming
6. Mobile Device

Gen 5 - Pervasive

Stage-wise Tools

- **Need Analysis:**

1. Apps

- **Delivery:**

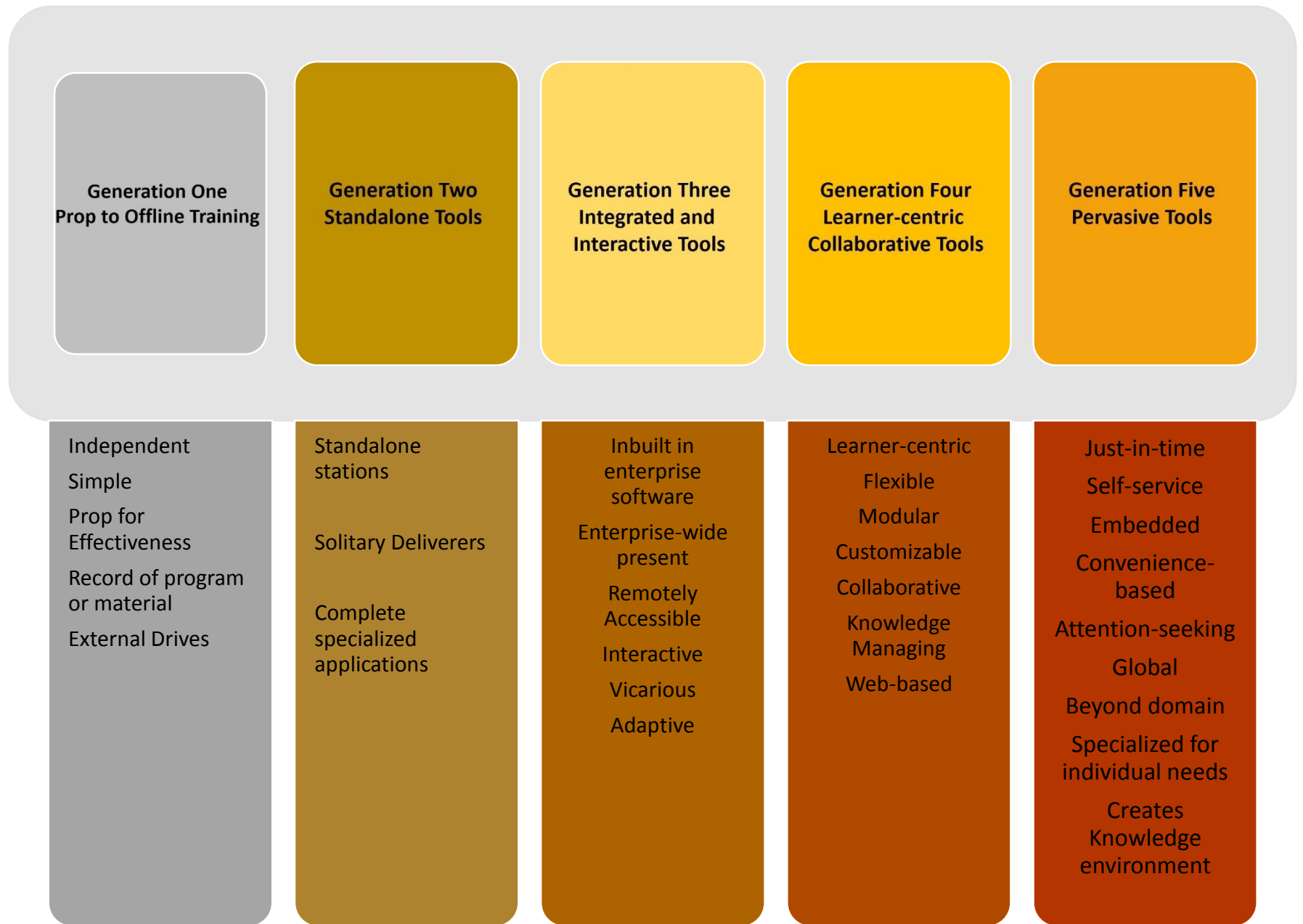
1. Social media

- **Appraisal:**

1. Social Media

- **Follow-up:**

1. Not new



Main Features of the Tools in the Five Generations

Generation Five Tools

Generation Four Tools

Video Streaming
Audio Streaming
Smart Board
Virtual
Classroom
Webcasting
Mobile Devices

App
Social Media

Generation Three Tools

Online Classes
E-library
Instant
Messaging
Screencasting
Web Portals
Virtual Reality

Generation Two Tools

Email
Software
LMS
Websites
Projector
Live chat
Simulator

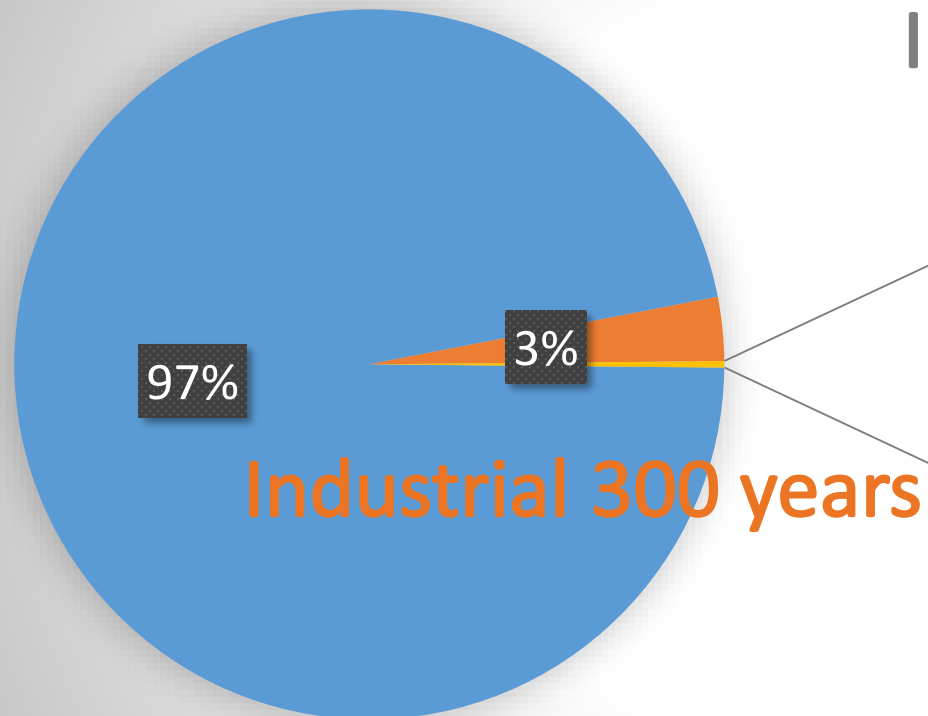
Generation One Tools

Audio
Video
E-forms

Speed of Change

Agrarian 10,000 years

Information 30 years



10 Geographic Locations

	Tata Motors	M&M	Maruti Suzuki
Bangalore			
Gurgaon			
Haridwar			
Jaipur			
Jamshedpur			
Lucknow			
Mumbai			
Pant Nagar			
Pune			
Ranjangaon			

Research Methodology

The research question of this study is:

“What are the changes taking place in training and development practices in the information age from the viewpoint of training and development tools in the select cases of automobile industry for the period of year 1995 to the year 2015?”