

التعلم المصغر: مقتطفات سريعة ذات مغزى لحلول التدريب

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ملخص البحث: يؤدي التقدم في تكنولوجيا المعلومات، مع التغييرات في المجتمع إلى إيجاد نماذج جديدة للتدريب. يُنظر إلى "مقتطفات التدريب" على أنها برامج فعالة من حيث التكلفة تعمل كتدريب سريع وذو مغزى. وتُصنف "المقتطفات" إلى "مقتطفات معلوماتية" و "مقتطفات تعليمية". تستخدم المقتطفات المعلوماتية لتوفير معلومات سريعة للجمهور المستهدف، في حين يمكن النظر إلى المقتطفات التعليمية باعتبارها كائنات تعلم استخدمت بالفعل لتعليم شيء ما. ويمكن استخدام كلا النوعين من المقتطفات كعوامل تعزيز لعالم التدريب. يمكن استخدام المقتطفات كحلول تدريبية سريعة وفعالة من حيث التكلفة وأيضاً كإضافات لحلول التدريب القائمة. وفي ضوء أنواع المحتوى، يمكن تطوير أنماط التعلم الخاصة بالجمهور المستهدف والقدرات المؤسسية لمنظمة ما، والاستراتيجيات الفعالة لتقديم التدريب، والعائد المرتفع على الاستثمار باستخدام إطار التعلم المرن. يستعرض منهج التصميم الواقعي المستخدم في هذه الورقة بصورة شاملة جميع مراحل عملية تطوير مقتطفات التدريب في ضوء القضايا الحرجة والمتضمنة الفئات الثمانية للإطار. باستخدام هذا المدخل، يمكن للمؤسسات تلقي توصيات لضبط تخصيص الموارد. إن نتائج استخدام المقتطفات المصممة بشكل جيد، وذات التكلفة المنخفضة، والمعززة للسلوك، تسهم في تحقيق التغيير الناجح للسلوك وتحسين الأداء للمتدربين.

الكلمات الدلالية: التعلم المصغر، مقتطفات، حلول التدريب.

Microlearning: Quick and Meaningful Snippets for Training Solutions

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Abstract: Advances in information technology coupled with the changes in society are creating new paradigms for training. Training “snippets” can be viewed as cost-effective programs that serve as quick and meaningful training. We categorize “snippets” into “informational snippets” and “instructional snippets.” Informational snippets can be used to provide quick information to target audience whereas instructional snippets can be viewed as learning objects which actually used to teach something. We see the use of both types of snippets as reinforcing agents for the training world. Snippets can be used as cost-effective, quick and stand-alone training solutions and also as add-ons to existing training solutions. Based on the types of content, learning styles of target population and the institutional capabilities of an organization, effective strategies for training delivery and a high return on investment can be developed using the Flexible Learning Framework. The realistic and pragmatic design approach used in this paper comprehensively reviews all phases of the training snippets development process in the light of critical issues encompassing the eight categories of the framework. By using this approach, organizations can receive recommendations for adjustments of funds and allocations of resources. The outcome of well-designed meaningful, low-cost, reinforcing snippets contribute to the successful change of behavior and performance improvement for trainees.

Key Words: Microlearning, Snippets, and Training Solutions

Introduction

Organizations facing challenges for disseminating resources for high return-on-investment for performance improvement. They need just-in-time and most cost-effective way to train for better results. Can we do it? Advances in information technology coupled with the changes in society are creating new paradigms for training. These massive changes are having a tremendous impact on our training systems. Learners in this new paradigm require rich learning environments supported by well-designed resources. They demand affordable, efficient, easily accessible, open, flexible, well-designed, learner-centered, distributed and facilitated learning environments. To provide this feature-rich environment we must develop efficient and effective training solutions. With the blessing of informational technology, innovative training solutions can be developed either as stand-alone e-learning or as supplemental assets to traditional instruction. Research shows that busy working adults find “just-in-time” training snippets are useful in their professional life.

What and Why

We consider Training “snippets” are as quick and meaningful solutions to training environments. Training “snippets” can be viewed as cost-effective programs that serve as quick and meaningful training. We categorize “snippets” into “informational snippets” and “instructional snippets.” Informational snippets can be used to provide quick information to target audience whereas instructional snippets can be viewed as learning objects which actually used to teach something. For example, an email announcement about the arrival of a new computer can serve as an information snippet whereas a short training video on how to use the computer can serve an instructional snippet. We see the use of both types of snippets as reinforcing agents for the training world. Snippets can be used as cost-effective, quick and stand-alone training solutions and also as add-ons to existing training solutions.

Design Approach

Each learning experience should be designed as comprehensively as possible regardless of size and scope. We use the Flexible Learning Framework (Khan, 2007) to capture an organization's inventory of learning by addressing issues encompassing the eight dimensions of its training culture: pedagogical, technological, interface design, evaluation, management, resource support, ethical and institutional (Table 1).

Table 1 Dimensions of Training Environment

Training Dimensions	Descriptions
<i>Institutional</i>	The institutional category is concerned with issues of administrative affairs, academic affairs and services related to training.
<i>Management</i>	The management of e-learning refers to the maintenance of the learning environment and distribution of information.
<i>Technological</i>	The technological category examines issues of technology infrastructure in training environments. This includes infrastructure planning, hardware and software.
<i>Pedagogical</i>	The pedagogical category refers to teaching and learning. This category addresses issues concerning content analysis, audience analysis, goal analysis, medium analysis, design approach, organization, and learning strategies.
<i>Ethical</i>	The ethical considerations of e-learning relate to social and political influences, cultural diversity, bias, geographical diversity, trainee diversity, the digital divide, etiquette, and legal issues.
<i>Interface design</i>	Interface design refers to the overall look and feel of training programs. Interface design categories encompass page and site design, content design, navigation, accessibility and usability testing.
<i>Resource support</i>	The resource support category examines the online support and resources required to foster meaningful learning.
<i>Evaluation</i>	The evaluation of e-learning includes both assessment of trainees and evaluation of the training environment.

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The framework allows us to review an organization's existing learning environment from the perspective of what works, what doesn't and recommend various cost-effective, efficient and meaningful training solutions based on its organizational mission and strategy. The framework serves as the Refining Filter tool for training solutions (Table 2).

Table 2 Organizational Training Development Refining Process

Organization	Refining Filter	Training Elements	Add-Ons
<p>Mission & Vision Culture, Strategies, Tactics, Goals and Objectives</p> <p>Assets Information & Knowledge</p> <p>Subject Matter Experts Documents Resources</p> <p>IT & Facilities Infrastructure Technical equipment, network & storage systems Training Environment</p>		<p>Revised & Improved</p> <ul style="list-style-type: none"> • Instructor-Led Training (ILT) • E-Learning • Computer-Based Training (CBT) • E-Book • Manual • Video • Conferencing • Other training formats 	<p>Trainings Snippets</p>

Effective training strategies are core to the development of an effective training solution including snippets. Guided by the framework, one can design, develop, evaluate and implement training snippets with appropriate instructional strategies and delivery methods. By integrating instructional strategies with appropriate delivery mechanisms, organizations achieve better results and a high return on investment.

This approach strives for implementation of quality of training solutions by evaluating the instructional effectiveness (e.g., learning related) and technical effectiveness (e.g., bandwidth, file size, production quality, connectivity, etc.) of various learning strategies and delivery methods applied. Table 3 shows design strategies, delivery and evaluation mechanism for snippets.

Table 3 Snippets design strategies, delivery and evaluation mechanism

Snippets	Instructional Strategies	Delivery Method	Instructional Effectiveness					Technical Effectiveness					
			Excellent	Good	Fair	Poor	NA	Excellent	Good	Fair	Poor	NA	
Games	Role-Playing	Computer-based & physical											
	Self-Directed Learning												
	Collaborative Learning												
	Apprenticeship												
	Mentoring												

Conclusion

Based on the types of content, learning styles of target population and the institutional capabilities of an organization, effective strategies for training delivery and a high return on investment can be developed using the Flexible Learning Framework. The realistic and pragmatic design approach used in this paper comprehensively reviews all phases of the training snippets development process in the light of critical issues encompassing the eight categories of the framework. By using this approach, organizations can receive recommendations for adjustments of funds and allocations of resources. The outcome of well-designed meaningful, low-cost, reinforcing snippets contribute to the successful change of behavior and performance improvement for trainees.

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