	Gaming actions							
Entity manipulations			Movement		Time-related	Information		
Capture	Eliminate	Own	Avoid	Shoot	Manipulate time	Ask questions		
Collect	Exchange	Plan / Strategy	Collide	Target	Start / Stop time	Answer questions / trivia		
Create	Generate	Remove	Move	Teleport	Advance game period	Obtain help		
Customize	Manage resources	Select	Evade	Traverse		See performance evaluation		
Design	Manipulate gravity (physics)	Tactical maneuver	Rotate	Visit		Watch / Listen to / Read information		
Destroy	Match	Trade virtual items				Watch / Listen to / Read story		
Edit								

Gaming goals						
Score	Tasks	Narrative	Competition	Other goals		
Maximize performance	Collect resources	Complete quest	Be the first to reach the end	Configure game		
Maximize score	Collect information	Complete side quests	Be last player standing	Learn to use interface		
	Solve puzzle	Form/discover goal		Perform task within allotted time		
		Get acquainted with story		Reach resources end		
		Reach narrative end				

	Gaming tools										
Obje	cts	Attributes	Time	Feedback	Help	Chance/ Randomness	Narrative (aesthetics)	Rules	Segmentation of gameplay	Goal metrics	Score
2D/3D space	Information	Lives	Chronometer	Achievements	Advice and assistance	Dice	Cut scenes	(In)complete information	Alternating turns	Achievement	Cash score
Avatars	Modifiers	Position in space	Time pressure	Leaderboards	Guide character	Lottery	Role play	Competition	Challenges	Performance record	Composite metrics
Cards	Non-playing characters (NPC)	Roles		Penalties	Checklists/ Task lists	Random appearances	Story (text)	Game modes	Checkpoints	Score	Experience points
Gifts	Tiles	Secrets		Performance meters	Tips	Randomizers		Game master / referee	Game period	Success level	Karma points
Goods	Tokens	Virtual skills		Performance record	Tutorial			Multiplayer	Infinite gameplay	Time	Redeemable points
Grids	Virtual money			Points	Warning messages			Zero-sum / non- zero-sum	Levels		Social network score
				Progress bar					Metagame		Video game score
				Rewards					Puzzles		
				Status levels					Quest / Problem		
									Time		

		Learning	actions		
Remembering	Understanding	Applying	Analyzing	Evaluating	Creating
Define	Compare	Apply	Advertise	Argue	Add to
Describe	Convert	Calculate	Analyze	Assess	Build model
Draw	Demonstrate	Change	Categorize	Choose	Combine
Find	Describe	Choose	Compare	Critique	Compose
Identify	Discuss	Classify	Contrast	Debate	Construct
Imitate	Distinguish	Complete goal	Deduce	Decide	Create
Label	Explain	Complete	Differentiate	Defend	Design
List	Explore	Construct	Discover	Determine	Devise
Locate	Find more information about	Examine	Distinguish	Discuss	Forecast
Match	Generalize	Experiment	Examine	Estimate	Form goal
Memorize	Interpret	Illustrate	Explain	Evaluate	Formulate
Name	Objectify	Interpret	Identify	Judge	Hypothesize
Observe	Outline	Make	Investigate	Justify	Imagine
Read	Paraphrase	Manipulate	Separate	Prioritize	Invent
Recall	Predict	Modify	Subdivide	Rate	Originate
Recite	Put into own words	Perform action/task	Take apart	Recommend	Plan
Recognize	Relate	Produce		Review	Predict
Relate	Restate	Put into practice		Select	Propose
Reproduce	Summarize	Put together		Value	
Select	Translate	Show		Verify	
State	Visualize	Solve		Weigh	
Write		Translate		_	
Tell		Use			

	Learning tools							
Drama- tizing	Graphical infor-mation	Interaction	Multimedia	Problem- solving	Textual in	formation	Other	
Dramas	Art	Court trials	Animation	Challenge	Analogies	Posters	Creations	
Drama- tizations	Cartoons	Debates	Films	Problems	Arguments	Recommenda tions	Events	
	Diagrams	Demonstra- tions	Media presen- tations	Puzzles	Bulletin boards	Reports	Inventions	
	Displays	Experiments	Recordings		Classifications	Routines	Sculptures	
	Graphed information	Group discussions	Songs		Conclusions	Rules	Self- evaluations	
	Graphics	Question- naires	Speech		Definitions	Standards	Systems	
	Graphs	Simulator	Television programs		Editorials	Story	Values	
	Illustrations	Speculations	Videos		Forecasts	Student diary		
		Surveys			Information	Summaries		
		Tests			Magazine articles	Task list/ checklist		
					Models	Tasks		
					Newspapers	Textbooks		
					Organizations	Texts	_	
					Outlines	Tips		
					Poems			

		Learning goals		
Bloom's Taxonomy – Cognitive domain	Bloom's Taxonomy – Affective domain	Bloom's Taxonomy – Psychomotor domain	Kolb's experiential learning cycle	Fink's Taxonomy
Remembering	Receiving phenomena	Perception (awareness)	Concrete experience	Foundational Knowledge
Understanding	Responding to phenomena	Set	Active experimentation	Application
Analyzing	Valuing	Guided response	Reflective observation	Integration
Applying	Organization	Mechanism (basic proficiency)	Abstract conceptualization	Human dimension
Evaluating	Internalizing values	Complex Overt Response		Caring
Creating		Adaptation		Learning how to learn
		Origination		

Instructional actions

Demonstrate

Present material

Present problem

Present quiz

Qualitatively assess performance

Quantitatively assess performance

Repetition

Review lesson

Reward good performance

Sanction bad performance

Scaffold

Show similar problems

Stress importance

Suggest improvements

Support recovery from errors

Tell story

Instructional tools					
Challenge					
Checklists					
Deadlines					
Discussion					
Help text					
Limited set of choices					
Multiple chances					
Penalties					
Performance measures					
Practice tests					
Questions & answers					
Rewards					
Simulators					
Story					
Tips / assistance					
Warning messages					

Instruction	al goals
Gagné's Nine Events of Instruction	ARCS Model of Motivational Design
Gain attention	Attention
Inform learner of objective	Relevance
Stimulate recall of prior learning	Confidence
Present the stimulus	Satisfaction
Provide learning guidance	
Elicit performance	
Provide feedback	
Assess performance	
Enhance retention and transfer	

