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as country music. The album incorporates styles of pop, rock, folk and country, and is composed of acoustic instruments, electronic synths and drum machines. Initial reviews mostly praised Swift's songwriting for its emotional exploration and engagement, but critics deemed the production inconsistent and questioned her identity as a country artist.
 Swift supported Red with the Red Tour (20132014). Red topped the charts and received multi-platinum certifications in Australia, Canada, New Zealand and the United Kingdom. In the United States it spent seven weeks atop the Billboard200. Red was nominated for Album of the
 Year and Best Country Album at the 2014 Grammy Awards. (Fullarticle...)Recently featured: Sir William Gordon-Cumming, 4th BaronetGreat Wilbraham (causewayed enclosure)Henry de HinuberArchiveBy emailMore featured articlesAboutTrichogenes claviger... that Trichogenes claviger (examples pictured) can climb nets using outgrowths from its
 head?... that Philippe Housiaux took a law examination instead of competing in the 1972 Summer Olympics?... that "Whistle" was composed because of a miscommunication between a film director and the songwriters?... that Fletcher Ransommunication between a film director and the songwriters?... that "Whistle" was composed because of a miscommunication between a film director and the songwriters?... that "Whistle" was composed because of a miscommunication between a film director and the songwriters?... that "Whistle" was composed because of a miscommunication between a film director and the songwriters?... that "Whistle" was composed because of a miscommunication between a film director and the songwriters?... that "Whistle" was composed because of a miscommunication between a film director and the songwriters?... that "Whistle" was composed because of a miscommunication between a film director and the songwriters?... that "Whistle" was composed because of a miscommunication between a film director and the songwriters?... that "Whistle" was composed because of a miscommunication between a film director and the songwriters?... that "Whistle" was composed because of a miscommunication between a film director and the songwriters?... that "Whistle" was composed because of a miscommunication between a film director and the songwriters?... that "Whistle" was composed because of a miscommunication between a film director and the songwriters are songwriters?... that "Whistle" was composed because of a miscommunication between a film director and the songwriters are songwriters.
 wrote and illustrated a book of satirical cartoons about Theodore Roosevelt titled My Policies in Jungleland?... that AHOF, a K-pop group
 formed on a reality show, includes two members who were not on the winning team?... that Worrall Reed Carter wrote about beans, bullets and black oil? ArchiveStart a new articleNominate an articleNominate an articleNominate and the Syrian
 Armed Forces result in hundreds of deaths. The International Criminal Court issues arrest warrants for Taliban leaders Hibatullah Akhundzada and Abdul Hakim Haqqani over their alleged persecution of women in Afghanistan. Flooding in Central Texas, United States, leaves at least 140 people dead. Ongoing: Gaza warRussian invasion of
 UkrainetimelineSudanese civil wartimelineRecent deaths: Andrea GibsonRaymond GuiotFelix BaumgartnerFauja SinghBradley John MurdochFrank BarrieNominate an articleJuly 21: Belgian National Day (1831), Marine Day in Japan (2025)Sirimavo Bandaranaike905 Louis III, Holy Roman Emperor, was captured and blinded during his attempt to
 restore Carolingian power over Italy by King Berengar I.1877 Much of central Pittsburgh, Pennsylvania, was burned and looted during the Great Railroad Strike of 1877.1960 Sirimavo Bandaranaike (pictured) was sworn in as prime minister of Ceylon, becoming the world's first democratically elected female head of government.1990 The Taiwanese
 military ordered the deportation of dozens of illegal immigrants from mainland China in sealed boat holds, causing 25 deaths due to suffocation. 2007 Harry Potter series by J. K. Rowling, was released and sold 15 million copies in its first 24 hours, making it the fastest-selling book in
 history. Nelson Dewey (d.1889) Fiammetta Wilson (d.1920) Johnny Peirson (b.1925) Erling Haaland (b.2000) More anniversaries: July 20 July 21 July 22 Archive By emailList of days of the year About One Direction performing in 2015 The English Irish boy band One Direction released five studio albums, seventeen singles, and numerous music videos between
2011 and 2015, becoming one of the most commercially successful groups of the 2010s. Formed during the seventh series of The X Factor in 2010 and signed to Simon Cowell's Syco Records, One Direction quickly rose to international fame. Their debut single, "What Makes You Beautiful", was a global hit, followed by chart-topping albums Up All
Night, Take Me Home, and Midnight Memories. The latter made them the first band ever to have their first three albums debut at number one on the Billboard200. They extended this streak with their fourth album, Four, and capped their discography with Made in the A.M. in 2015 before going on an indefinite hiatus. (Fullist...)Recently featured:
 KerivoulinesAccolades received by Inception1956 Summer Olympics medal tableArchiveMore featured listsThe southern scrub robins. It is endemic to Australia, where it occurs in mallee and heathland in the semi-arid southern parts of the continent. Its
range includes several disjoint regions from central New South Wales through western Victoria and southern South Australia. It is a relatively dull and large robin, with adults around 19 to 20 centimetres (7.5 to 7.9in) in length, of which around a third are the tail feathers. Most of the plumage is
 grey. It breeds between July and December and has a nest on the ground, built of twigs and lined with twigs, grass and bark. Unusually for a passerine, it lays only a single egg. This southern scrub robin was photographed in the Nombinnie Nature Reserve in New South Wales. Photograph credit: JJ Harrison Recently featured: C/2022E3 (ZTF) Passion
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 posterDateJanuary26,2014(2014-01-26)5:008:30 p.m. PSTLocationStaples Center, Los Angeles, California, U.S.Hosted by LL Cool JMost awards Television/radio coverageNetworkCBSViewership28.5 million viewers.[1]55thGrammyAwards57thThe 56th Annual Grammy AwardsTelevision/radio coverageNetworkCBSViewership28.5 million viewers.[1]55thGrammyAwards57thThe 56th Annual Grammy AwardsTelevision/radio coverageNetworkCBSViewership28.5 million viewers.[1]55thGrammyAwards57thThe 56th Annual GrammyAwards57thThe 56th Annual 
 Awards presentation was held on January 26, 2014, at Staples Center in Los Angeles.[2] The show was moved to January to avoid competing with the 2014 Winter Olympics in Sochi, as was the case in 2010. The eligibility period for the 56th Annual
Grammy Awards was October 1, 2012, to September 30, 2013.[3] The nominations were announced on December 6, 2013 during a live televised concert to CBS, The Grammy Nominations with nine. Justin Timberlake, Kendrick Lamar, Macklemore & Ryan
 Lewis and Pharrell Williams each received seven nominations. Daft Punk and Pharrell Williams were nominated twice for both Album of the Year and Record of the Year sound engineer Bob Ludwig received the most nominations by a non-performing artist, with five [5]Daft Punk won five awards, [6] including Album of the Year for Random Access
 Memories and Record of the Year, with Pharrell Williams, for "Get Lucky", Best Pop Duo/Group Performance, and an additional win for Best Engineered Album, Non-Classical completing a clean sweep for the project that night.[7][8] Macklemore and Ryan Lewis won four trophies, including Best New Artist, and led an industry show of support for gay
 marriage with a performance of their song "Same Love" to accompany a mass wedding of gay and heterosexual couples, which was presided over by Queen Latifah.[9] Lorde's "Royals" received awards for Best Pop Solo Performance and Song of the Year.[10][11] Carole King was honored as MusiCares Person of the Year on January 24, two days prior
 to the awards ceremony [12]On June 4, 2013, the Recording Academy approved a number of changes recommended by its Awards & Nominations Committee, including adding a new category for Best American Roots Song to the American Music field. This songwriters' award will encompass all the subgenres in this field such as Americana, bluegrass,
 blues, folk, and regional roots music. The Best Hard Rock/Metal Performance category was renamed Best Music Video/Film field. Its two categories will be renamed
 Best Short Form Music Video will now be known as Best Music Video and Best Long Form Music Video will change into Best Music Film. These changes bring the total number of categories at the 2014 Grammy Awards to 82, up from 81 at the 2013 Grammy Awards to 82, up from 81 at the 2013 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Grammy Awards to 82, up from 81 at the 2014 Gram
 Hayes"Invisible"Katy PerryJuicy J"Dark Horse"Robin ThickeChicago"Does Anybody Really Know What Time It Is?""Beginnings""Saturday in the Park""Blurred Lines"Keith UrbanGary Clark Jr.[14]"Cop Car"John Legend"All of Me"Taylor Swift[15]"All Too Well"P!nkNate Ruess"Try""Just Give Me a Reason"Ringo Starr"Photograph"Kendrick
 LamarImagine Dragons[16]"m.A.A.d city""Radioactive"Kacey Musgraves"Follow Your Arrow"Paul McCartneyRingo Starr"Queenie Eye"Merle HaggardKris KristoffersonWillie NelsonBlake Shelton[17]"Highwayman""Okie from Muskogee""Mammas Don't Let Your Babies Grow Up to Be Cowboys"Daft PunkNile RodgersStevie WonderPharrell
 Williams "Get Lucky" "Harder, Better, Faster, Stronger" Lose Yourself to Dance "Le Freak" "Another Star" Around the World Sara Bareilles Carole King[15] Beautiful "Brave Metallica Lang Lang Lang 18] "One Macklemore & Ryan Lewis 15] Mary Lambert Madonna [19] Queen Latifah Trombone Shorty & Orleans Avenue Same Love "Open Your Heart Billie Joe
 ArmstrongMiranda Lambert[14]Tribute to Phil Everly"When Will I Be Loved"Nine Inch NailsQueens of the Stone AgeDave GrohlLindsey Buckingham[20]"Copy of A""My God Is the Sun"Pharrell Williams and Anna Kendrick presented Best Pop Duo/Group PerformanceSteve Coogan introduced Katy
 PerryBruno Mars introduced P!nkAriana Grande and Miguel presented Best Pop Solo PerformanceBlack Sabbath introduced Paul McCartney Gloria Estefan and Marc Anthony presented Best Pop Vocal AlbumJeremy Renner introduced Willie
 Nelson, Blake Shelton, Merle Haggard and Kris KristoffersonZac Brown and Martina McBride presented Best Country AlbumNeil Patrick Harris introduced Daft PunkCyndi Lauper introduced MetallicaSmokey Robinson and Steven Tyler
presented Record of the YearQueen Latifah introduced Macklemore & Ryan LewisJohn Legend and Ryan Seacrest presented Music Educator AwardLang Lang introduced "In Memoriam"Olivia Harrison, Alicia Keys and Yoko Ono presented Music Educator AwardLang Lang introduced "In Memoriam"Olivia Harrison, Alicia Keys and Yoko Ono presented Music Educator AwardLang Lang introduced "In Memoriam"Olivia Harrison, Alicia Keys and Yoko Ono presented Music Educator AwardLang Lang introduced "In Memoriam"Olivia Harrison, Alicia Keys and Yoko Ono presented Music Educator AwardLang Lang introduced "In Memoriam"Olivia Harrison, Alicia Keys and Yoko Ono presented Music Educator AwardLang Lang introduced "In Memoriam"Olivia Harrison, Alicia Keys and Yoko Ono presented Music Educator AwardLang Lang introduced "In Memoriam"Olivia Harrison, Alicia Keys and Yoko Ono presented Music Educator AwardLang Lang introduced "In Memoriam"Olivia Harrison, Alicia Keys and Yoko Ono presented Album of the Year "Get Lucky" Daft Punk, Alicia Keys and Yoko Ono presented Album of the Year "Get Lucky" Daft Punk, Alicia Keys and Yoko Ono presented Album of the Year "Get Lucky" Daft Punk, Alicia Keys and Yoko Ono presented Album of the Year "Get Lucky" Daft Punk, Alicia Keys and Yoko Ono presented Album of the Year "Get Lucky" Daft Punk, Alicia Keys and Yoko Ono presented Album of the Year "Get Lucky" Daft Punk, Alicia Keys and Yoko Ono presented Album of the Year "Get Lucky" Daft Punk, Alicia Keys and Yoko Ono presented Album of the Year "Get Lucky" Daft Punk, Alicia Keys and Yoko Ono presented Album of the Year "Get Lucky" Daft Punk, Alicia Keys and Yoko Ono presented Album of the Year "Get Lucky" Daft Punk, Alicia Keys and Yoko Ono presented Album of the Year "Get Lucky" Daft Punk, Alicia Keys and Yoko Ono presented Album of the Year "Get Lucky" Daft Punk, Alicia Keys and Yoko Ono presented Album of the Year "Get Lucky" Daft Punk, Alicia Keys and Yoko Ono presented Album of the Year "Get Lucky" Daft Punk, Alicia Keys and Yoko Ono presented Album of the Year 
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 engineer"Blurred Lines" Robin Thicke featuring T.I. and Pharrell WilliamsPharrell, producer; Andrew Coleman & Tony Maserati, engineers/mixers; Chris Gehringer, mastering engineers/mixers engineers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixers/mixe
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 Bareilles, Mark Endert & John O'Mahony, producers; Jeremy Darby, Mark Endert & John O'Mahony, engineers/mixers; Greg Calbi, mastering engineers/mixers; Greg Calbi, mastering engineers/mixers; DJ Dahi, Hit-Boy, Skhye Hutch, Just Blaze, Like, Terrace Martin, Dawaun
 Parker, Pharrell, Rahki, Scoop DeVille, Sounwave, Jack Splash, Tabu, Tha Bizness & T-Minus, producers; Derek Ali, Dee Brown, Dr. Dre, James Hunt, Mauricio "Veto" Iragorri, Mike Larson, Jared Scott, Jack Splash & Andrew Wright, engineers/mixers; Mike Bozzi & Brian "Big Bass" Gardner, mastering engineersRed Taylor SwiftGary Lightbody & Ed
 Marroquin, Justin Niebank, John Rausch, Eric Robinson, Pawel Sek, Jake Sinclair, Mark "Spike" Stent & Andy Thompson, engineers/mixers; Tom Coyne & Hank Williams, mastering engineers/mixers; Tom Coyne & Ryan LewisAb-Soul, Ben Bridwell, Ray Dalton, Eighty4 Fly, Hollis, Mary Lambert, Baffalo Madonna, Evan Roman, Schoolboy Q, Allen
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 featuring Mary Lambert)Best New ArtistMacklemore & Ryan LewisJames BlakeKendrick LamarKacey MusgravesEd SheeranBest Pop Solo Performance "Royals" Lorde Brave Sara Bareilles When I Was Your Man Bruno Mars Roar Katy Perry Mirrors Justin Timberlake Best Pop Duo/Group Performance & Ryan LewisJames BlakeKendrick LamarKacey MusgravesEd SheeranBest Pop Solo Performance & Ryan LewisJames BlakeKendrick LamarKacey MusgravesEd SheeranBest Pop Solo Performance & Ryan LewisJames BlakeKendrick LamarKacey MusgravesEd SheeranBest Pop Solo Performance & Ryan LewisJames BlakeKendrick LamarKacey MusgravesEd SheeranBest Pop Solo Performance & Ryan LewisJames BlakeKendrick LamarKacey MusgravesEd SheeranBest Pop Solo Performance & Ryan LewisJames BlakeKendrick LamarKacey MusgravesEd SheeranBest Pop Solo Performance & Ryan LewisJames BlakeKendrick LamarKacey MusgravesEd SheeranBest Pop Solo Performance & Ryan LewisJames BlakeKendrick LamarKacey MusgravesEd SheeranBest Pop Solo Performance & Ryan LewisJames BlakeKendrick LamarKacey MusgravesEd SheeranBest Pop Solo Performance & Ryan LewisJames BlakeKendrick LamarKacey MusgravesEd SheeranBest Pop Solo Performance & Ryan LewisJames BlakeKendrick LamarKacey MusgravesEd SheeranBest Pop Solo Performance & Ryan LewisJames BlakeKendrick LamarKacey Musgraves BlakeKendrick
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 & Richard ElliotHacienda Jeff Lorber FusionBest Pop Vocal AlbumUnorthodox Jukebox Bruno MarsParadise Lana Del ReyPure Heroine LordeBlurred Lines Robin ThickeThe 20/20 Experience The Complete Experience Justin TimberlakeBest Dance Recording "Clarity" Zedd & FoxesAnton Zaslavski (Zedd), producer and mixer "Need U (100%)" Duke
 Dumont featuring A*M*E & MNEKAdam Dyment & Tommy Forrest, producers; Adam Dyment & Tommy Forrest, mixer Atmosphere Kaskade Finn Bjarnson & Ryan Raddon, producers; Ryan Raddon, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer Atmosphere Kaskade Finn Bjarnson & Ryan Raddon, mixer Atmosphere Kaskade Finn Bjarnson & Ryan Raddon, mixer Atmosphere Kaskade Finn Bjarnson & Ryan Raddon, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer Atmosphere Kaskade Finn Bjarnson & Ryan Raddon, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest, mixer This Is What It Feels Like Armin Van Buuren & Tommy Forrest & Tom
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 [22]Viva Duets Tony Bennett and various artistsThe Standards Gloria EstefanCee Lo's Magic Moment Cee Lo GreenNow Dionne WarwickBest Rock Performance"Radioactive" Imagine Dragons"Kashmir (Live)" Led Zeppelin"Always Alright" Alabama Shakes"The Stars (Are Out Tonight)" David Bowie"My God Is the Sun" Queens of the Stone Age"I'm
  Shakin'" Jack WhiteBest Metal Performance"God Is Dead?" Black Sabbath"T.N.T." Anthrax"The Enemy Inside" Dream Theater"In Due Time" Killswitch Engage"Room 24" Volbeat & King DiamondBest Rock Song"Cut Me Some Slack"Dave Grohl, Paul McCartney, Krist Novoselic,
 Pat Smear)"Ain't Messin 'Round"Gary Clark Jr., songwriter (Gary Clark Jr.) "Doom and Gloom"Mick Jagger & Keith Richards, songwriters (Black Sabbath)" Panic Station "Matthew Bellamy, songwriter (Muse) Best Rock AlbumCelebration Day Led Zeppelin 13
 Black SabbathThe Next Day David BowieMechanical Bull Kings of Leon...Like Clockwork Queens of the City Vampire WeekendThe Worse Things Get, The Harder I Fight, The Harder I Fight, The Harder I Fight, The More I Love You Neko CaseTrouble Will Find Me
 The National Hesitation Marks Nine Inch NailsLonerism Tame ImpalaBest R&B Performance "Something" Snarky Puppy & Lalah Hathaway "Love and War" Tamar Braxton "Best of Me" Anthony Hamilton "Nakamarra" Hiatus Kaiyote & Q-Tip "How Many Drinks?" Miguel & Kendrick Lamar Braxton "Best of Me" Anthony Hamilton "Nakamarra" Hiatus Kaiyote & Q-Tip "How Many Drinks?" Miguel & Kendrick Lamar Braxton "Best of Me" Anthony Hamilton "Nakamarra" Hiatus Kaiyote & Q-Tip "How Many Drinks?" Miguel & Kendrick Lamar Braxton "Best of Me" Anthony Hamilton "Nakamarra" Hiatus Kaiyote & Q-Tip "How Many Drinks?" Miguel & Kendrick Lamar Braxton "Best of Me" Anthony Hamilton "Nakamarra" Hiatus Kaiyote & Q-Tip "How Many Drinks?" Miguel & Kendrick Lamar Braxton "Best of Me" Anthony Hamilton "Nakamarra" Hiatus Kaiyote & Q-Tip "How Many Drinks?" Miguel & Kendrick Lamar Braxton "Best of Me" Anthony Hamilton "Nakamarra" Hiatus Kaiyote & Q-Tip "How Many Drinks?" Miguel & Kendrick Lamar Braxton "Best of Me" Anthony Hamilton "Nakamarra" Hiatus Kaiyote & Q-Tip "How Many Drinks?" Miguel & Kendrick Lamar Braxton "Best of Me" Anthony Hamilton "Nakamarra" Hiatus Kaiyote & Q-Tip "How Many Drinks?" Miguel & Kendrick Lamar Braxton "Best of Me" Anthony Hamilton "Nakamarra" Hiatus Kaiyote & Q-Tip "How Many Drinks?" Miguel & Kendrick Lamar Braxton "Best of Me" Anthony Hamilton "Nakamarra" Hiatus Kaiyote & Me Many Drinks?" Miguel & Kendrick Lamar Braxton "Best of Me" Anthony Hamilton "Nakamarra" Hiatus Kaiyote & Me Many Drinks?" Miguel & Kendrick Lamar Braxton "Best of Me" Anthony Hamilton "Nakamarra" Hiatus Kaiyote & Me Many Drinks?" Miguel & Kendrick Lamar Braxton "Nakamarra" Hiatus Kaiyote & Me Many Drinks?" Miguel & Me Many Drin
Clark Jr. "Get It Right" Fantasia "Quiet Fire" Maysa "Hey Laura" Gregory Porter "Yesterday" Ryan ShawBest R&B Song "Pusher Love Girl James Fauntleroy, Jerome Harmon, Timberlake, songwriters (Justin Timberlake, songwriters (Justin Timberlake, songwriters (Justin Timberlake, songwriters (Justin Timberlake) Best of Me"Anthony Hamilton & Jairus Mozee, songwriters (Anthony Hamilton) Love and War Tamar Braxton
Darhyl Camper Jr., LaShawn Daniels & Makeba Riddick, songwriters (Tamar Braxton) "Only One"PJ Morton & Stevie Wonder) "Without Me"Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, Songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, Songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, Songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, Songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, Songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, Songwriters (Fantasia, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, Missy Elliott, Al Sherrod Lambert, Harmony Samuels & Kyle Stewart, Missy Elliott, Missy Ellio
 RihannaLove and War Tamar BraxtonSide Effects of You FantasiaOne: In the Chamber Salaam RemiNew York: A Love Story Mack WildsBest R&B AlbumGirl on Fire Alicia KeysR&B Divas Faith EvansLove in the Future John LegendBetter Chrisette MicheleThree Kings TGTBest Rap Performance "Thrift Shop" Macklemore & Ryan Lewis featuring
 Wanz "Swimming Pools (Drank)" Kendrick Lamar "Berzerk" Eminem "Started from the Bottom" Drake "Tom Ford" Jay-Z & Justin Timberlake "Now or Never" Kendrick Lamar & Mary J. Blige "Power Trip" J. Cole & Miguel "Remember You" Wiz Khalifa & The Weeknd "Part II (On the Run)" Jay-Z & Beyonc Best
 Rap Song "Thrift Shop" Ben Haggerty & Ryan Lewis, songwriters (Macklemore & Ryan Lewis, featuring Wanz) "F**in' Problems "Tauheed Epps, Aubrey Graham, Kendrick Lamar, Rakim Mayers & Noah Shebib, songwriters (Macklemore & Ryan Lewis, featuring Drake, 2 Chainz & Kendrick Lamar, Rakim Mayers & Noah Shebib, songwriters (Macklemore & Ryan Lewis, songwriters) (Macklemore &
 Justin Timberlake & Ernest Wilson, songwriters (Kurt Cobain, Dave Grohl & Krist Novoselic, songwriters) (Jay-Z & Justin Timberlake) "New Slaves" Christopher Breaux, Ben Bronfman, Mike Dean, Louis Johnson, Malik Jones, Elon Rutberg, Sakiya Sandifer, Che Smith, Kanye West & Cydell Young, songwriters (Anna Adamis & Gabor Presser,
 songwriters) (Kanye West)"Started from the Bottom"W. Coleman, Aubrey Graham & Noah Shebib, songwriters (Bruno Sanfilippo, songwriters) (Drake)Best Rap AlbumThe Heist Macklemore & Ryan LewisNothing Was the Same Drakegood kid, m.A.A.d city Kendrick LamarMagna Carta... Holy Grail Jay-ZYeezus Kanye WestBest Country Solo
 Performance "Wagon Wheel" Darius Rucker "I Drive Your Truck" Lee Brice "I Want Crazy" Hunter Hayes "Mama's Broken Heart" Miranda Lambert "Mine Would Be You" Blake Shelton Best Country Duo/Group Performance "From This Valley" The Civil Wars "Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Don't Rush" Kelly Clarkson & Vince Gill "Your Side of the Bed" Little Big Town "Highway Big
 Care" Tim McGraw, Taylor Swift & Keith Urban"You Can't Make Old Friends" Kenny Rogers & Dolly PartonBest Country Song"Merry Go 'Round"Shane McAnally, Kacey Musgraves & Josh Osborne, songwriter (Taylor Swift) I Drive Your Truck"Jessi Alexander, Connie Harrington & Jimmy Rogers & Dolly PartonBest Country Song"Merry Go 'Round"Shane McAnally, Kacey Musgraves)
 Yeary, songwriters (Lee Brice) "Mama's Broken Heart" Brandy Clark, Shane McAnally & Kacey Musgraves, songwriters (Miranda Lambert) "Mine Would Be You" Jessi Alexander, Connie Harrington & Deric Ruttan, songwriters (Blake Shelton) Best Country Album Same Trailer Different Park Kacey Musgraves Night Train Jason Aldean Two Lanes of
 Freedom Tim McGrawBased on a True Story... Blake SheltonRed Taylor SwiftBest New Age AlbumLove's River Laura SullivanLux Brian EnoIllumination Peter KaterFinal Call KitaroAwakening The Fire R. Carlos Nakai & Will ClipmanBest Improvised Jazz Solo"Orbits" Wayne Shorter, soloist "Don't Run" Terence Blanchard, soloist "Song for Maura"
 Paquito D'Rivera, soloist"Song Without Words #4: Duet" Fred Hersch, soloist"Stadium Jazz Donny McCaslin, soloistBest Jazz Vocal AlbumLiquid Spirit Gregory PorterThe World According to Andy Bey Andy Bey
 Provocative in Blue Terri Lyne CarringtonGuided Tour The New Gary Burton QuartetLife Forum Gerald ClaytonPushing the World Away Kenny GarrettOut Here Christian McBride TrioBest Large Jazz Ensemble AlbumNight in Calisia Randy Brecker, Wodek Pawlik Trio & Kalisz PhilharmonicBrooklyn Babylon Darcy James Argue's Secret SocietyWild
  Beauty Brussels Jazz Orchestra featuring Joe LovanoMarch Sublime Alan FerberIntrada Dave Slonaker Big BandBest Latin Jazz AlbumSong for Maura Paquito D'Rivera and Trio CorrenteLa Noche Ms Larga BuikaYo Roberto FonsecaEgg n Omar SosaLatin Jazz-Jazz Latin Wayne Wallace Latin Jazz QuintetBest Gospel/Contemporary Christian Music
 (Deitrick Haddon)"If I Believe"Wirlie Morris, Michael Paran, Charlie Wilson & Mahin Wilson, songwriters (Erica Campbell)"Still"Percy Bady, songwriter (Percy Bady featuring Lowell Pye)Best Contemporary Christian Music
  Song"Overcomer"David Garcia, Ben Glover & Christopher Stevens, songwriters (Mandisa)"Hurricane"Matt Bronleewe, Natalie Grant, "Steven Curtis Chapman, songwriter (Steven Curtis Chapman)"Speak Life"Toby McKeehan, Jamie Moore & Ryan Stevenson, songwriters
 (Tobymac) "Whom Shall I Fear (God of Angel Armies) "Ed Cash, Scott Cash & Chris Tomlin, songwriters (Chris Tomlin, songwriters (Live) Tasha CobbsBest For Last: 20 Year Celebration Vol. 1 (Live) Donald LawrenceBest Days Yet Bishop Paul S. MortonGod Chaser (Live) William
 MurphyBest Contemporary Christian Music AlbumOvercomer MandisaWe Won't Be Shaken Building 429All the People Said Amen (Live) Matt RedmanBurning Lights Chris TomlinBest Latin Pop AlbumVida Draco RosaFaith, Hope y Amor Frankie JViajero Frecuente Ricardo MontanerSyntek Aleks Syntek12
 Historias Tommy TorresBest Latin Rock Urban or Alternative AlbumTreinta Das La Santa CeciliaEl Objeto Antes Llamado Disco Caf TacubaOjo Por Ojo El TriChances Illya Kuryaki and the ValderramasRepeat After Me Los Amigos InvisiblesBest Regional Mexican Music Album (Including Tejano) Mi Manera Mariachi Divas de Cindy SheaEl Free Bandachi Divas de Cindy She
 Los RecoditosEn Peligro De Extincin IntocableRomeo y Su Nieta Paquita la del Barrio13 Celebrando El 13 Joan SebastianBest Tropical Latin AlbumPacific Mambo Orchestra Pacific 
 American Roots Song"Love Has Come For You"Edie Brickell & Steve Martin, songwriters (Steve Martin, songwriters (Steve Earle & The Dukes (& Duchesses))"Keep Your Dirty Lights On "Tim O'Brien & Darrell Scott, songwriters (Tim O'Brien and
 Baltimore Del McCoury BandIt's Just a Road The BoxcarsBrothers of the Highway Dailey & VincentThis World Oft Can Be Della MaeThree Chords and the Truth James KingBest Blues AlbumGet Up! Ben Harper With Charlie MusselwhiteRemembering Little Walter Billy Boy Arnold, Charlie Musselwhite, Mark Hummel, Sugar Ray Norcia & James
 HarmanCotton Mouth Man James CottonSeesaw Beth Hart with Joe BonamassaDown In Louisiana Bobby RushBest Folk AlbumMy Favorite Picture of You Guy ClarkSweetheart of the Sun The GreencardsBuild Me Up from Bones Sarah JaroszThe Ash & Clay The Milk Carton KidsThey All Played for Us: Arhoolie Records 50th Anniversary Celebration
 Various Artists; Chris Strachwitz, producerBest Regional Roots Music AlbumDockside Sessions Terrance Simien & The Zydeco ExperienceThe Life & Times Of...The Hot 8 Brass Band Ho
 MarleyReincarnated Snoop LionOne Love, One Life Beres HammondThe Messiah SizzlaReggae Connection Sly & Robbie and the Jam MastersBest World Music AlbumSavor Flamenco Gipsy KingsLive: Singing for Peace Around the World Ladysmith Black Mambazo (tie)No Place for My Dream Femi KutiThe Living Room Sessions Part 2 Ravi
  ShankarBest Children's AlbumThrow a Penny in the Wishing Well Jennifer GasoiBlue Clouds Elizabeth Mitchell & You Are My FlowerThe Mighty Sky Beth Nielsen ChapmanRecess Justin RobertsSinging Our Way Through: Songs for the World's Bravest Kids Alastair Moock & FriendsBest Spoken Word Album (Includes Poetry, Audio Books & Story
 Telling)America Again: Re-becoming The Greatness We Never Weren't Stephen ColbertCarrie and Me Carol BurnettLet's Explore Diabetes with Owls David SedarisStill Foolin' 'Em Billy CrystalThe Storm King Pete SeegerBest Comedy AlbumCalm Down Gurrl Kathy GriffinI'm Here to Help Craig FergusonA Little Unprofessional Ron WhiteLive Tig
 NotaroThat's What I'm Talkin' About Bob SagetBest Musical Theater AlbumKinky BootsBilly Porter & Stark Sands, principal soloists; Sammy James Jr., Cyndi Lauper, Stephen Oremus & William Wittman, producers; Cyndi Laupe
 Miley Shapiro & Lauren Ward, principal soloists; Michael Croiter, Van Dean & Chris Nightingale, producers; Tim Minchin, composer & lyricist (Original Broadway Cast) Motown: The MusicalBrandon Victor Dixon & Valisia Lakae, principal soloists; Frank Filipetti & Ethan Popp, producers (Robert Bateman, Al Cleveland, Georgia Dobbins, Lamont
 Lovesmith, Deke Richards, Smokey Robinson, Barrett Strong, Ronald White, Stevie Wonder & Syreeta Wright, lyricists) (Original Broadway Cast)Best Compilation Soundtrack for Visual MediaSound City: Real to Reel Dave Grohl & Various ArtistsDjango Unchained 
 Edition) Various ArtistsMuscle Shoals Various ArtistsBest Score Soundtrack for Visual MediaSkyfallThomas Newman, composerLife of PiMychael Danna, composerLife of PiM
 Media "Skyfall" (from Skyfall) Adele Adkins & Paul Epworth, songwriters (Adele) "Atlas" (from The Hunger Games: Catching Fire) Guy Berryman, Jonny Buckland, Will Champion & Chris Martin, songwriters (Coldplay) "Silver Linings Playbook) Diane Warren, songwriters (Jessie J) "We Both Know" (from Safe
 Haven)Colbie Caillat & Gavin DeGraw, songwriters (Colbie Caillat featuring Gavin DeGraw)"Yourg and Beautiful" (from The Great Gatsby)Lana Del Rey)"You've Got Time" (from Orange Is the New Black)Regina Spektor, songwriters (Lana Del Rey)"You've Got Time" (from Orange Is the New Black)Regina Spektor)
 Saxophone And Chamber Orchestra "Clare Fischer, composer (The Clare Fischer Orchestra)" Away "Chuck Owen, composer (Chuck Owen, Chuck Owen, Composer (Chuck Owen, Chuck Owen, Chuc
 Diversion In Three Parts Vince Mendoza, composer (Quartet San Francisco) Best Instrumental Arrangement On Green Dolphin Street Gordon Goodwin, arranger (Chuck Owen, arranger (Chuck Owen & The
 Jazz Surge)"Skylark"Nan Schwartz, arranger (Amy Dickson)"Wild Beauty"Gil Goldstein, arranger (Bobby McFerrin & Esperanza Spalding)"La Vida Nos Espera"Nan Schwartz, arranger (Gian Marco)"Let's Fall In
  Love"Chris Walden, arranger (Calabria Foti Featuring Seth MacFarlane)"The Moon's A Harsh Mistress"John Hollenbeck, arranger (John Hollenbeck) "What A Wonderful World"Shelly Berg, arranger (Gloria Estefan)Best Recording PackageLong Night MoonSarah Dodds & Shauna Dodds, art directors (Reckless Kelly)Automatic Music Can Be FunMike
 Brown, Zac Decamp, Brian Grunert & Annie Stoll, art directors (Geneseo) Magna Carta... Holy GrailBrian Roettinger, art director (Jay-Z) Metallica Through The Next DayJonathan Barnbrook, art director (David Bowie) Best Boxed or
 Special Limited Edition PackageWings Over America (Deluxe Edition)Simon Earith & James Musgrave, art directors (Paul McCartney and Wings)The Brussels AffairCharles Dooher & Scott Sandler, art directors (The Rolling Stones)How Do You Do (Limited Edition Box Set)Mayer Hawthorne, art director (Mayer Hawthorne)The Road To Red Rocks
 BodyAlec Palao, album notes writer (Country Joe and the Fish)Stravinsky: Le Sacre Du PrintempsJonathan Cott, album notes writer (Leonard Bernstein & New York Philharmonic)360 Sound: The Columbia Records StorySean Wilentz, album notes writer (various artists)Work Hard, Play Hard, Pray Hard: Hard Time, Good Time & End Time Music
 19231936Nathan Salsburg, album notes writer (various artists)Best Historical AlbumCharlie Is My Darling Ireland 1965 (tie)Teri Landi, Andrew Loog Oldham & Steve Rosenthal, compilation producers; Bob Ludwig, mastering engineer (The Rolling Stones)The Complete Sussex And Columbia Albums (tie)Leo Sacks, compilation producers; Joseph M.
 Palmaccio, Tom Ruff & Mark Wilder, mastering engineers (Bill Withers) Call It Art 19641965 Joe Lizzi & Ben Young, compilation producers; Steve Fallone, Joe Lizzi & Ben Young, mastering engineers (New York Art Quartet) Pictures Of Sound: One Thousand Years Of Educed Audio: 9801980 Patrick Feaster & Steven Ledbetter, compilation producers; Steve Fallone, Joe Lizzi & Ben Young, mastering engineers (New York Art Quartet) Pictures Of Sound: One Thousand Years Of Educed Audio: 9801980 Patrick Feaster & Steven Ledbetter, compilation producers; Steven Ledbetter, compilati
 Michael Graves, mastering engineer (Various Artists) Wagner: Der Ring Des Nibelungen (Deluxe Edition) Philip Siney, compilation producer; Ben Turner, mastering engineer (Sir Georg Solti) Best Engineered Album, Non-Classical Random Access Memories Peter Franco, Mick Guzauski, Florian Lagatta & Daniel Lerner, engineers; Bob Ludwig, mastering
 engineer (Daft Punk)Annie UpChuck Ainlay, engineer; Bob Ludwig, mastering engineer (Pistol Annies)The Blue RoomHelik Hadar & Leslie Ann Jones, engineers; Bernie Grundman, mastering engineer (Alice in Chains)...Like
 ClockworkJoe Barresi & Mark Rankin, engineers; Gavin Lurssen, mastering engineer (Queens of the Stone Age)The MooringsTrina Shoemaker, engineer; Eric Conn, mastering engineer (Robin Thicke featuring T.I. & Pharrell)"Happy" (Pharrell Williams BBC" (Jay-Z)"Blurred Lines" (Robin Thicke featuring T.I. & Pharrell)"Happy" (Pharrell Williams BBC")
 Williams)"I Can't Describe (The Way I Feel)" (Jennifer Hudson featuring T.I.)"Nuclear" (Destiny's Child)"Oceans" (Jay-Z featuring Frank Ocean)"Reach Out Richard" (Mayer Hawthorne)"The Stars Are Ours" (Jay-Z featuring Frank Ocean)"Reach Out Richard" (Mayer Hawthorne)"The Stars Are Ours" (Mayer Hawthorne)"The Stars Are Ours" (Jay-Z featuring Frank Ocean)"Reach Out Richard" (Mayer Hawthorne)"The Stars Are Ours" 
 Lindsey Buckingham)"Love They Say" (Tegan and Sara)"Things Are Changin'" (Gary Clark Jr.)Tr! (Green Day)"When My Train Pulls In" (Gary Clark Jr.)"You've Got Time" (Regina Spektor)Dr. LukeBounce It (Juicy J Featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Fall Down (will.i.am featuring Miley Cyrus)"Give It 2 U" (Robin Thicke featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Fall Down (will.i.am featuring Miley Cyrus)"Give It 2 U" (Robin Thicke featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Fall Down (will.i.am featuring Miley Cyrus)"Give It 2 U" (Robin Thicke featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Fall Down (will.i.am featuring Miley Cyrus)"Give It 2 U" (Robin Thicke featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Fall Down (will.i.am featuring Miley Cyrus)"Give It 2 U" (Robin Thicke featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Fall Down (will.i.am featuring Miley Cyrus)"Give It 2 U" (Robin Thicke featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Fall Down (will.i.am featuring Miley Cyrus)"Give It 2 U" (Robin Thicke featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Fall Down (will.i.am featuring Miley Cyrus)"Give It 2 U" (Robin Thicke featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Fall Down (will.i.am featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Fall Down (will.i.am featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Fall Down (will.i.am featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Fall Down (will.i.am featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Fall Down (will.i.am featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Fall Down (will.i.am featuring Wale & Trey Songz)"Crazy Kids" (Kesha)"Crazy Kids"
 Kendrick Lamar) "Roar" (Katy Perry) "Rock Me" (One Direction) "Wrecking Ball" (Miley Cyrus) "Play it Again" (Becky G) Ariel Rechtshaid Days Are Gone (Haim) "Everything Is Embarrassing" (Sky Ferreira) "Lost in My Bedroom" (Sky Ferreira) "Lost in M
 Good" (Major Lazer featuring Santigold, Vybz Kartel, Danielle Haim and Yasmin)Jeff TweedyThe Invisible Way (Low)One True Vine (Mavis Staples)Wassaic Way (Sarah Lee Guthrie & Johnny Irion)Best Remixed Recording, Non-Classical"Summertime Sadness" (Cedric Gervais Remix)Cedric Gervais, remixer (Lana Del Rey)"Days Turn Into Nights" (Andy
 Caldwell Remix)Andy Caldwell, remixer (Delerium featuring Michael Logen)"If I Lose Myself" (Alesso Vs. OneRepublic)"Locked Out of Heaven" (Sultan + Ned Shepard Remix)Rupert Parkes, remixer (Bob Marley and the
 Wailers)Best Surround Sound AlbumLive KissesAl Schmitt, surround mix engineer; Tommy LiPuma, surround mastering engineer; Les Claypool & Jeff Fura, surround producers (Primus)Signature
 Sound Opus OneLeslie Ann Jones, surround mix engineer; Michael Romanowski, surround mastering engineer; Herbert Waltl, surround mix engineer; Darcy Proper, surround mastering engineer; Jim Anderson & Jane Ira Bloom, surround mix engineer; Herbert Waltl, surround mix engineer; Darcy Proper, surround mix eng
 RhythmDaniel Shores, surround mix engineer; Daniel Shores, surround mastering engineer; Dan Merceruio, surround producer (Richard Scerbo & Inscape) Best Engineered Album, Classical Winter Morning WalksDavid Frost, Brian Losch & Tim Martyn, engineers; Tim Martyn, mastering engineer (Dawn Upshaw, Maria Schneider, Australian Chamber (Dawn Upshaw) and the control of t
Orchestra & Saint Paul Chamber Orchestra) Hymn to the VirginMorten Lindberg, engineer (Tone Bianca, Sparre Dahl, & Schola Cantorum) La Voie TriomphaleMorten Lindberg, engineer (Brad Wells & Roomful of Teeth) Vinci:
 ArtaserseHans-Martin Renz, Wolfgang Rixius & Ulrich Ruscher, engineers (Diego Fasolis, Philippe Jaroussky, Max Emanuel Ceni, Daniel Behle, Franco Fagioli, Valer Barna-Sabadus, Yuriy Mynenko & Concerto Kln)Producer of the Year, ClassicalDavid FrostAndres: Home Stretch (Timo Andres, Andrew Cyr & Metropolis Ensemble)Angel Heart, A Music
 Storybook (Matt Haimovitz & Uccello)Beethoven: Piano Sonatas, Vol. 2 (Jonathan Biss)Ben-Haim: Chamber Works (ARC Ensemble)Celebrating The American Spirit (Judith Clurman & Essential Voices USA)Elgar: Enigma Variations; Vaughan Williams: The Wasps; Greensleeves (Michael Stern & Kansas City Symphony)Guilty Pleasures (Rene Fleming,
 Sebastian Lang-Lessing & Philharmonia Orchestra) Verdi: Otello (Riccardo Muti, Aleksandrs Antonenko, Krassimira Stoyanova, Carlo Guelfi, Chicago Symphony Orchestra & St. Paul Chamber Orchestra) Wanfred Eicher Beethoven
 Diabelli-Variationen (Andrs Schiff)Canto Oscuro (Anna Gourari)Prt: Adam's Lament (Tnu Kaljuste, Latvian Radio Choir, Vox Clamantis, Sinfonietta Riga, Estonian Philharmonic Chamber Choir & Tallinn Chamber Orchestra)Tabakova: String Paths (Maxim Rysanov)Marina A. Ledin, Victor LedinBizet: Symphony In C; Jeux D'Enfants; Variations
 Chromatiques (Martin West & San Francisco Ballet Orchestra) Traveling Sonata European Music For Flute & Guitar (Viviana Guzmn & Jrmy Jouve) Voyages (Conrad Tao) Zia (Del Sol String Quartet) James Mallinson Berlioz: Grande Messe Des Morts (Colin Davis, London Symphony Chorus, London Philharmonic Choir & London Symphony Chorus, London Philharmonic Ch
 Orchestra)Bloch: Symphony In C-Sharp Minor & Poems Of The Sea (Dalia Atlas & London Symphony Orchestra)Wagner: Das Rheingold (Valer, Bach: Partita, Chorales & Ciaccona (Nigel Short, Tenebrae & London Symphony Orchestra)Wagner: Das Rheingold (Valer, Bach: Partita, Chorales & Ciaccona (Nigel Short, Tenebrae & London Symphony Orchestra)Wagner: Das Rheingold (Valer, Bach: Partita, Chorales & Ciaccona (Nigel Short, Tenebrae & London Symphony Orchestra)Wagner: Das Rheingold (Valer, Bach: Partita, Chorales & Ciaccona (Nigel Short, Tenebrae & London Symphony Orchestra)Wagner: Das Rheingold (Valer, Bach: Partita, Chorales & Ciaccona (Nigel Short, Tenebrae & London Symphony Orchestra)Wagner: Das Rheingold (Valer, Bach: Partita, Chorales & Ciaccona (Nigel Short, Tenebrae & London Symphony Orchestra)Wagner: Das Rheingold (Valer, Bach: Partita, Chorales & Ciaccona (Nigel Short, Tenebrae & London Symphony Orchestra)Wagner: Das Rheingold (Valer, Bach: Partita, Chorales & Ciaccona (Nigel Short, Bach: Partita, Bach
 Gergiev, Ren Pape, Stephan Rgamer, Nikolai Putilin & Mariinsky Orchestra) Weber: Der Freischtz (Colin Davis, Christine Brewer, Sally Matthews, Simon O'Neill, London Symphony Orchestra) Weber: Der Freischtz (Colin Davis, Christine Brewer, Sally Matthews, Simon O'Neill, London Symphony Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Jonas Kaufmann, Ren Pape, Nina Stemme & Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Jonas Kaufmann, Ren Pape, Nina Stemme & Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Jonas Kaufmann, Ren Pape, Nina Stemme & Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Jonas Kaufmann, Ren Pape, Nina Stemme & Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Jonas Kaufmann, Ren Pape, Nina Stemme & Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Jonas Kaufmann, Ren Pape, Nina Stemme & Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Jonas Kaufmann, Ren Pape, Nina Stemme & Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Jonas Kaufmann, Ren Pape, Nina Stemme & Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Jonas Kaufmann, Ren Pape, Nina Stemme & Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Jonas Kaufmann, Ren Pape, Nina Stemme & Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Jonas Kaufmann, Ren Pape, Nina Stemme & Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Mariinsky Orchestra) Wagner: Die Walkre (Valery Gergiev, Anja Kampe, Mariinsky Orchestra)
 SaksAdams: Nixon in China (John Adams, Russell Braun, Ginger Costa-Jackson, James Maddalena, Janis Kelly, Richard Paul Fink, Robert Brubaker, Kathleen Kim, Metropolitan Opera Chorus & Orchestra) The
 Enchanted Island (William Christie, Joyce DiDonato, David Daniels, Danielle De Niese, Luca Pisaroni, Lisette Oropesa, Plcido Domingo, Metropolitan Opera Orchestra & Chorus) Handel: Rodelinda (Harry Bicket, Rene Fleming, Andreas Scholl, Joseph Kaiser, Stephanie Blythe, Iestyn Davies, Shenyang & The Metropolitan Opera Orchestra) Live At
 Carnegie Hall (James Levine, Evgeny Kissin & The Metropolitan Opera Orchestra & Chorus) Best Orchestra & Chorus & Choru
 PhilharmonikerBest Opera RecordingAds: The TempestThomas Ads (conductor); Simon Keenlyside, Isabel Leonard, Audrey Luna, Alan Oke (soloists); Luisa Bricetti and Victoria Warivonchick (producers)Britten: The Rape of LucretiaOliver Knussen (conductor); Ian Bostridge, Peter Coleman-Wright, Susan Gritton, Angelika Kirchschlager (soloists);
 John Fraser (producer)Kleiberg: David and BathshebaTnu Kaljuste (conductor); Valer Barna-Sabadus, Daniel Behle, Max Emanuel Ceni, Franco Fagioli, Philippe Jaroussky (soloists); Ulrich Russcher (producer)Wagner: Der Ring des
 (conductor) (with Tui Hirv & Rainer Vilu; Estonian Philharmonic Chamber Choir; Sinfonietta Riga & Tallinn Chamber Orchestra; Latvian Radio Choir & Vox Clamantis)Berlioz: Grande Messe de MortsColin Davis (conductor) (with Barry Banks, London Symphony Orchestra, London Philharmonic Choir and London Symphony Chorus)Parry: Works for
 Chorus & OrchestraNeeme Jrvi (conductor), Adrian Partington (chorus master) (with Amanda Roocroft, BBC National Orchestra of Wales and BBC National Chorus of Wales) Whitbourn: Annelies and BBC National Orchestra of Wales and BBC National Chorus of Wales) Whitbourn: Annelies and BBC National Orchestra of Wales and BBC National Chorus of Wales) Whitbourn: Annelies and BBC National Chorus of Wales and BBC National Orchestra of Wales and BBC National Chorus of W
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 Classical Instrumental SoloCorigliano: Conjurer Concerto for Percussionist & String Orchestra Evelyn Glennie (soloist), Peter Etvs (conductor) The Edge of LightGloria ChengLindberg: Piano Concerto No. 2Yefim Bronfman (soloist), Alan Gilbert (conductor) Salonen
 Violin Concerto; NyxLeila Josefowicz (soloist), Esa-Pekka Salonen (conductor)Schubert: Piano Sonatas D. 845 & D. 960Maria Joo PiresBest Classical Vocal SoloWinter Morning WalksDawn UpshawDrama QueensJoyce DiDonatoMissionCecilia BartoliSchubert: WinterreiseChristoph PrgardienWagnerJonas KaufmannBest Classical
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 No. 2Magnus LindbergAdam's LamentArvo PrtViolin ConcertoEsa-Pekka SalonenPartita for 8 VoicesCaroline ShawBest Music Video producer; Daniel Weisman, video producer Safe and Sound Capital CitiesGrady Hall, video director; Buddy Enright, video producer; Daniel Weisman, video
 producer; Danny Lockwood, video producer Picasso Baby: A Performance Art Film Jay-ZMark Romanek, video director; Shawn Carter & Aristides McGarry, video producers Can't Hold Us Macklemore & Ryan Lewis, Video director; Shawn Carter & Jenny Koenig
 video producers"I'm Shakin'" Jack WhiteDori Oskowitz, video director; Raquel Costello, video producersLive 2012 ColdplayPaul Dugdale, video director; Violaine Etienne, Aron Levine & Scott Rodger, video producersLive 2012 ColdplayPaul Dugdale, video director; Violaine Etienne, Aron Levine & Scott Rodger, video producersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUndersUnde
 video director; Tim Lynch, video producerI'm in I'm out and I'm Gone: The Making of Get Up! Ben Harper with Charlie MusselwhiteDanny Clinch, video director; Ben Harper, video producerThe Road to Red Rocks Mumford & SonsNicolas Jack Davies & Frederick Scott, video directors; Dan Bowen, video producerCarole King[12]The Beatles[23]Clifton
 ChenierThe Isley BrothersKraftwerkKris KristoffersonArmando ManzaneroMaud PowellRick Hall[23]Jim MarshallEnnio MorriconeEmile BerlinerLexiconKent Knappenberger (of Westfield Academy and Central School in Westfield, New York)Main article: Grammy Hall of FameTitleArtistRecord LabelYear of ReleaseGenreFormatAfter the Gold RushNeil
 Young and Crazy HorseReprise1970Folk RockAlbumThe Chicago Columbia1969Progressive RockAlbumThe Chicago Columbia1964FolkAlbumThe Chicago Columbia1964FolkAlbumThe Chicago Columbia1964FolkAlbumThe Chicago Columbia1964FolkAlbumThe Chicago Columbia1969Progressive RockAlbumThe Chicago Columbia1964FolkAlbumThe Chicago Columbia1969Progressive RockAlbumThe Chicago 
 RevivalFantasy1969RockSingle"Georgia on My Mind"Hoagy Carmichael & his Orchestra (featuring Bix Beiderbecke on Cornet)Victor1930JazzSingle"Get Up (I Feel Like Being a) Sex Machine"James BrownKing1970FunkSingle"Honky Tonk Women"The Rolling StonesLondon1969Hard RockSingle"Jolene"Dolly PartonRCA Nashville1973Country
 PopSingleThe Joshua TreeU2Island1987RockAlbumKristoffersonKris KristoffersonMonument1970CountryAlbum"Low Rider"WarUnited Artists1975FunkSingleMary PoppinsCast including Julie Andrews, Dick Van Dyke, David Tomlinson, Karen Dotrice, Matthew Garber and othersWalt Disney1964SoundtrackAlbum"Nobody Knows the Trouble I've
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 HeronFlying Dutchman1971FunkSingle Strange Things Happening Every Day Sister Rosetta TharpeDecca1944Negro SpiritualSingle Walk This Way Run-D.M.C. featuring
 following people appeared in the In Memoriam segment:[24][25]Van CliburnGeorge JonesRay PriceEydie GormAnnette FunicelloRichie HavensRay ManzarekAlvin LeeDennis FrederiksenAndy JohnsSid BernsteinAl CouryMarian McPartlandCedar WaltonGloria LynneGeorge DukeBebo ValdsChico HamiltonDonald ShirleyColin DavisStanley SolowBobb
 BlandMorris HoltLarry MonroeChris KellyLord InfamousJunior MurvinHugh McCrackenRicky LawsonMike ShipleyTompall GlaserJack GreeneCowboy Jack ClementSlim WhitmanJody PayneSteven FromholzMindy McCreadyJim FoglesongSherman HalseyJJ CalePeter RauhoferChi ChengChet FlippoPaul Williams (Crawdaddy! creator)Steve JonesMarvin
 LateefDonald ByrdRoy Campbell Jr.Cory MonteithRandy OstinMilt OlinEd ShaughnessyAl PorcinoNorman WinterOscar Castro-NevesJim HallFrank WessRay DolbyAmar BoseMort NasatirLou ReedAlan MyersPhil EverlyThe following artists received multiple nominations:Nine: Jay-ZSeven: Kendrick Lamar, Macklemore & Ryan Lewis, Justin Timberlake
 Pharrell WilliamsFive: Daft Punk, Drake, Bob LudwigFour: Lorde, Bruno Mars, Kacey Musgraves, Taylor Swift, Three: Jeff Bhasker, Black Sabbath, Tamar Braxton, Fantasia, Peter Franco, Dave Grohl, Mick Guzauski, Florian Lagatta, Daniel Lerner, Manny Marroquin, Charlie Musselwhite, Nile Rodgers, Robin Thicke, Tye Tribbett, TehrahTwo: Jessi
 Alexander, Sara Bareilles, Mary J. Blige, David Bowie, Edie Brickell, Rob Caggiano, Gary Clark Jr., Tasha Cobbs, Coldplay, Ray Dalton, Lana Del Rey, Alexandre Desplat, Dr. Luke, Natalie Grant, Dave Grohl, Anthony Hamilton, Ben Harper, Connie Harrington, Calvin Harris, Imagine Dragons, Sarah Jarosz, Kaskade, Mary Lambert, Led Zeppelin, Ari
 Levine, Joel Little, Matt Maher, Mandisa, Max Martin, Steve Martin, Stev
   received multiple awards:[6] Five: Daft PunkFour: Bob Ludwig, Macklemore & Ryan Lewis, Pharrell WilliamsThree: Peter Franco, Mick Guzauski, Florian Lagatta, Daniel Lerner, Nile Rodgers, Justin TimberlakeTwo: David Frost, Dave Grohl, Jay-Z, Lorde, Paul McCartney, Kacey Musgraves, Tye TribbettThe 56th Annual Grammy Awards were the first
in the show's history to incorporate comprehensive Live-GIF integration through Tumblr. Creative agency Deckhouse Digital was hired to facilitate the integration, producing more than 50 animated GIFs during the more than 5.1
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 | next 50) (20 | 50 | 100 | 250 | 500)Retrieved from " WhatLinksHere/56th Annual Grammy Awards" Constructivism is the philosophical and scientific position that knowledge arises through a process of active constructivism is the philosophical and scientific position that knowledge arises through a process of active construction. Explain the foundational principles of constructivism including both cognitive and social perspectives. Compare the roles of major
 theorists such as Piaget, Vygotsky, Dewey, and Bruner, Apply constructivist principles to analyze and redesign classroom practices, including instructional learning theory that emphasizes how students actively build understanding, rather than
 passively receive information. Influenced by theorists like Piaget, Vygotsky, Dewey, and Bruner, it views learning as a dynamic, student-centered process shaped by prior knowledge, social interaction, and meaningful experiences. In construct their own
 knowledge. Contrary to common assumptions, constructivism is relevant at all levels of learning and remains a powerful guide for classroom practice. As Brooks (1999) noted, Constructivism, the study of learning, is about how we all make sense of our world, and that really hasnt changed. This chapter will explore how constructivism particularly
cognitive and social constructivismcan help reframe how teachers understand and support student learning. Cognitive & Social Constructivism are two similar learning theories which share a large number of underlying assumptions: Both Approaches Social Constructivism are two similar learning theories which share a large number of underlying assumptions: Both Approaches Social Constructivism are two similar learning theories which share a large number of underlying assumptions: Both Approaches Social Constructivism are two similar learning theories which share a large number of underlying assumptions: Both Approaches Social Constructivism are two similar learning theories which share a large number of underlying assumptions are two similar learning theories which share a large number of underlying assumptions are two similar learning theories which share a large number of underlying assumptions are two similar learning theories which share a large number of underlying assumptions are two similar learning theories which share a large number of underlying assumptions are two similar learning theories which share a large number of underlying assumptions are two similar learning theories which share a large number of underlying assumptions are two similar learning theories which share a large number of underlying assumptions are two similar learning theories which is the share a large number of underlying assumptions are two similar learning theories which is the share a large number of underlying assumptions are two similar learning theories which is the share a large number of underlying assumptions are two similar learning theories which are two similar learning theories which is the share a large number of underlying assumptions are two similar learning theories which is the share a large number of underlying assumption are two similar learning theories which is the share a large number of the share and the share a large number of 
antiquity. Socrates, in dialogue with his followers, asked directed questions that led his students to realize for themselves the weaknesses in their thinking. Learning is perceived as an active, not a passive, process, where knowledge is constructed, not acquired. Knowledge construction is based onpersonal experiences and the continual testing of
hypotheses. Each person has a different interpretation and construction of knowledge process, based on past experiences and cultural factors. Emphasis is on the collaborative functions are believed to originate in and are explained as products of social
 interactions. Learning is more than the assimilation of new knowledge by learners; it was the process by which learners were integrated into a knowledge community. Believed that constructivists such as Piaget had overlooked the essentially social nature of language and consequently failed to understand that learning is a collaborative
process. Underlying Assumptions Jonassen (1994) proposed that there are eight characteristics that underlie the constructivist learning environments provide multiple representations of reality. Multiple representations avoid oversimplification and represent the complexity of
the real world. Constructivist learning environments emphasize knowledge construction instead of knowledge reproduction. Constructivist learning environments provide learning environments such as real- world
 settings or case-based learning instead of predetermined sequences of instruction. Constructivist learning environments enable context- and content- dependent knowledge construction. Constructivist learning environments encourage thoughtful reflection on experience. Constructivist learning environments encourage thoughtful reflection on experience.
knowledge through social negotiation, not competition among learners for recognition. According to constructivists philosophy, there is no absolute knowledge, just our interpretation of it. The acquisition of knowledge therefore requires the individual to consider the information and based on their past experiences, personal views, and cultural
background construct an interpretation of the information that is being presented to them. Students construct their own meaning by building on their previous knowledge and experiences are matched against existing knowledge, and thelearner constructs new or adapted rules to make sense of the world. In such
anenvironment the teacher cannot be in charge of the students learning, since everyonesview of reality will be so different and students will come to learning already possessingtheir own constructs of the world. Teaching styles based on this approach therefore mark a conscious effort to move from these traditional, objectivist models didactic, memory
oriented transmission models(Cannella & Reiff, 1994) to a more student-centred approach. How would you respond to the suggestion that Constructivism as a philosophical assumption applies only to more advanced levels of teaching and learning? Main Constructivism as a philosophical founder of this
approach. Bruner(1990) and Piaget (1972) are considered the chief theorists among the social constructivists, while Vygotsky (1978) is the major theorist among the social constructivists. Dewey rejected the notion that schools should focus on repetitive, rote memorization proposed a method of directed living students would engage in
real-world, practicalworkshops in which they would demonstrate their knowledge through creativity and collaboration. Students should be provided with opportunities to think from themselves and articulate their thoughts. Dewey called for education to be grounded in real experience. He wrote, If you havedoubts about how learning happens, engage in
sustained inquiry: study, ponder, consideralternative possibilities and arrive at your belief grounded in evidence. Piaget rejected the idea that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. Instead, he proposed that learning was the passive assimilation of given knowledge. In the passive assimilation was the passive as the passive as the passive as t
construct knowledge by creating andtesting their own theories of the world. Although less contemporary & influential, it has inspired several important educational differences Learners dont have knowledge forced on them they create it for
 themselvesBrunerInfluenced by Vygotsky, Bruner emphasizes the role of the teacher, language and instruction. He thought that different processes were used by learners in problem solving, that these vary from person to person and that social interaction lay at the root of goodlearning. Bruner builds on the Socratic tradition of learning through
dialogue, encouraging the learnerto come to enlighten themselves through reflection. Careful curriculum design is essentialso that one area builds upon the other. Learning must therefore be a process of discoverywhere learners build their own knowledge, with the active dialogue of teachers, building ontheir existing knowledge. Bruner initiated
curriculum change based on the notion that learning is an active, socialprocess in which students construct new ideas or concepts based on their current knowledge. He provides the following principles of constructivistic learning: Instruction must be concerned with the experiences and contexts that make the student willing and able to learn
(readiness). Instruction must be structured so that it can be easily grasped by the student (spiral organization). Instruction should be designed to facilitate extrapolation and or fill in the gaps (going beyond the information given). Vygotsky. He rejected the assumption made by Piaget that it was possible
to separate learning from its social context. According to Vygotsky: Every function in the childs cultural development appears twice: first, on the social leveland, later on, on the individual level; first, between people (interpsychological) and theninside the child (intrapsychological). This applies equally to voluntary attention, tological memory, and to the
formation of concepts. All the higher functions originate asactual relationships between individuals. (p. 57)Although Vygotsky died at the age of 38 in 1934, most of his publications did not appear in English until after 1960. There are, however, a growing number of applications of social constructivism in the area of educational technology. By the 1980s
the research of Dewey and Vygotsky had blended with Piagets work indevelopmental psychology into the broad approach of constructivism. The basic tenet of constructivism is that students learn by doing rather than observing. Students bring priorknowledge into a learning situation in which they must critique and re-evaluate theirunderstanding of
it. Which of the four constructivist theoristsPiaget, Vygotsky, Dewey, or Brunerdo you most resonate with as a future teacher, and why? How might their ideas influence the way you design learning experiences or interact with students in your classroom? Applying Constructivism Approaches in the ClassroomGeneral OverviewIn the constructivist
classroom, the focus tends to shift from the teacher to the students. The classroom is no longer a place where the teacher (expert) pours knowledge intopassive students, who wait like empty vessels to be filled. In the constructivist model, thestudents are urged to be actively involved in their own process of learning. In the constructivist classroom,
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both teacher and students think of knowledge as a dynamic, ever-changing view of the world we live in and the ability to successfully stretch and explorethat view not as inert factoids to be memorized. What the students currently believes, whether correct or incorrect, is important. Despite having the same learning experience, each individual will base their learning on the understanding or constructing a meaning is an active and continuous process. Learning may involve some conceptual changes. When students construct a new meaning, they may not believe it but may give it provisional acceptance or even rejection. Learning is an active, not a passive, process and depends on the students taking responsibility to learn. The main activity in a constructivist classroom is solving problems. Students explore the topic, they draw

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conclusions, and, asexploration continues, they revisit those conclusions. Exploration of questions leads to morequestions from the exception of the greater emphasis placed on learning through social interaction, and the value placed on cultural background
For Vygotsky, culture gives the child thecognitive tools needed for development. Adults in the learners environment are conduitsfor the tools of the culture, which include language, cultural history, social context, andmore recently, electronic forms of information access. In social constructivist classrooms collaborative learning is a process of peer
interaction thatis mediated and structured by the teacher. Discussion can be promoted by the presentation of concepts, problems or scenarios, and is guided by means of effectively directedquestions, the introduction and clarification of concepts and information, and references topreviously learned material. Role of the Teacher Role of the
StudentTeachers act as a guide on the stage) providing students with opportunities to test the adequacy of their current understandingsStudents play a more active role in, and accepts more responsibility for their own learning. Think about one class you are currently enrolled in. Which elements of this class could you
change to more closely align it with the constructivism in the Classroom: Learning Strategies that are aligned with cognitive and social constructivism. Below is such a list of strategies. Reciprocal Teaching A teacher and 2 to 4 students form a collaborative group
and take turns leadingdialogues on a topic. Within the dialogues, group members apply four cognitive strategies: Questioning Summarizing Clarifying Predicting This creates a ZPD in which students gradually assume more responsibility for the material, and through collaboration, forge group expectations for high-level thinking, and acquireskills vital for
learning and success in everyday life.Cooperative Learning goals, with each member responsible not only for their own learning but also for helping others learn. Key Features of Cooperative LearningFeatureDescriptionPositive
interdependenceStudents rely on one another to succeed; everyones contribution matters. Individual accountabilityEach student is responsible for their partno free-riding. Social skills Collaboration requires explicit practice in communication and
teamwork.Group processingGroups reflect on how well they worked together and how to improveSituated LearningIn situated learning is most effective when it is situated in authentic, meaningful activity rather than
abstract, decontextualized instruction. Some common examples of situated learning in educational contexts include teaching internships, classroom observations and theory-practice reflections, fieldtrips, role playing, project-based learning, etc. Anchored Instruction Presents learning within a rich meaningful problem or story (the
anchor). It is designed to engage students in active, situated learning by anchoring new knowledge to realistic, complex contexts. Key Features of Anchored InstructionFeatureDescriptionThe InstructionFeatureDescriptionThe InstructionFeatureDescriptionThe InstructionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeatureDescriptionFeat
challenges to promote transfer of learning. Student-centered Students explore, discuss, and apply knowledge rather than receive direct instruction. Multiple perspectives Problems often combine math, reading, science, and social studies. Alternative
AssessmentsConstructivists believe that assessment should be used as a tool to enhance both thestudents learning and the teachers understanding of students. Types ofassessments aligned to perspective include reflective journals/portfolios, case
studies, group-based projects, presentations (verbal or poster), debates, role playing etc.Within social constructivism, particularly, there is greater scope for involving student choice)Feedback- Emphasize growth over scoresBrooks and Brooks
(1993) state that rather than saying No when a student does not give the exact answer being sought, the constructivist teacher attempts to understand the student to construct new understanding and acquire new skills. Choose one of the constructivist teacher attempts to understand the student to construct new understanding and acquire new skills.
 classroom strategies described (e.g., reciprocal teaching, cooperative learning, or anchored instruction). In what ways does this strategy reflect constructivist principles, and how might it look in a classroom you hope to teach in? What challenges might you face in implementing it, and how could you address them?In your own words
define constructivism as a learning theory. How does it differ from more traditional models of instructivist classroom? There are multiple examples of instructional strategies aligned with constructivism (e.g., reciprocal teaching, anchored
instruction, cooperative learning). Describe an additional strategy based on your own learning experiences, and explain how it promotes student ownership of learning. What are two characteristics of constructivist assessment practices, and how do they differ from traditional assessments? Reflect on one class youve taken or observed. What change
could you make to more closely align it with constructivist principles? Explain your reasoning. A common misunderstanding regarding constructivism is that instructors should never tellstudents anything directly but, instead, should always allow them to construct knowledge for themselves. This is actually confusing a theory of pedagogy (teaching)
with a theory ofknowing. Constructivism assumes that all knowledge is constructed from the learnersprevious knowledge, regardless of how one is taught. Thus, even listening for instruction. Allyn & Bacon, Boston: MAHill, W.F. (2002)
Learning: A survey of psychological interpretation (7th ed), Allyn and Bacon, Boston, MA, Jordan, A., Carlile, O., & Stack, A. (2008). Approaches to learning: A guide for teachers. McGraw-Hill, Open University Press: Berkshire. Ormrod, J.E. (1995). Human Learning: A guide for teachers. McGraw-Hill, Open University Press: Berkshire. Ormrod, J.E. (1995). Human Learning: A guide for teachers. McGraw-Hill, Open University Press: Berkshire. Ormrod, J.E. (1995).
Guide to Assessment, Learning and Teaching. RoutledgeRyder, M (2009) Instructional Design Models. html Outline of learning theories and how they apply to practice: of models and good info on each: mryder/itc_data/idmodels.html Outline of learning theories: its introduction in the early
1900s, the theory of constructivism has been widely used as a framework for understanding how people learn. The basic tenet of constructivism is that people actively constructivism has been increasingly applied to
educational settings, as educators strive to create learning environments that are more active and engaging for students. What is constructivism is a learning approach that emphasizes active learning and cooperative learning approach that emphasizes active learning and cooperative learning environment, learners are actively
involved in constructing new information, rather than passively receiving information from the instructor.10 Benefits of Learning Theories in Developing Teaching StrategiesRead moreThe constructivist learning theory holds that learners are more likely to understand and remember new information if they can connect it to their existing
knowledge. What are the principles of constructivism? There are several principles of constructivism, but the main one is that learners constructed through their learning experiences. This is an active process, where learners view themselves as
capable of constructing meaning from information they receive.14 ways I facilitate cooperative learning in my classroomRead moreConstructivism is often associated with the work of Lev Vygotsky, who argued that social interaction is essential for learning. For Vygotsky, new learning always builds on previous learning, and so knowledge is always
constructed in relation to what a learner already knows. This view of teaching emphasizes the importance of providing learners with opportunities to build on their existing knowledge and to make connections between new and old ideas. Principles of Constructivist Learning Theory There are 7 principles of constructivist learning theory: 17 classroom
management theory examplesRead more1. The learner is active, 2. Constructivism is a social theory, 3. Knowledge is constructed, 4. New learning ActivitiesRead more6. Learning is an active process, and 7. The zone of proximal
development. Vygotskys idea of the zone of proximal development is particularly important in constructivism; it posits that new knowledge is constructivism; it posits that new knowledge is constructivism; it posits that new knowledge is constructivism.
role of the learner in actively constructivism, radical constructivism, and cognitive constructivism, first proposed by Lev Vygotsky, emphasizes the
importance of the learners social environment in shaping their cognition. Radical constructivism, proposed by Ernst von Glasersfeld, suggests that learners actively construct their own understanding of the world, independent of any external reality. Cognitive constructivism, proposed by Jean Piaget, suggests that cognition develops in stages and that
learners actively construct their own understanding as they move through these stages. Contributors to the learner. It has its roots in the work of Jean Piaget, who proposed that children construct their own understanding of the
world through their interactions with it. Lev Vygotsky later expanded on this idea, proposing that all learning is a social process and that we learn from others through our interactions with them. Adding Critical Thinking to LessonsRead moreThere are many different contributors to the theory of constructivism, but these are some of the most
important ones. Examples of constructivist classroom activities that can be used in the classroom discussions Students discuss a topic in small groups and then share their ideas with the class as
a whole.2. Brainstorming Students brainstorm ideas for a project or assignment in small groups. Addressing Cultural Gaps in the ClassroomRead more3. Jigsaw activities Students work in small groups to complete a task or puzzle, with each group responsible for one piece of the puzzle. 4. Concept mapping Students create a visual representation of
ideas or concepts using words, phrases, and/or images. 5. Problem or complete a task, with the teacher acting as a facilitator. 6. Inquiry-based learning Students work together in small
groups to complete an assignment or project. Advantages of Experiencial Learning Read more8. Hands-on learning students engage in active, hands-on learning students demonstrate their knowledge and skills through authentic tasks and projects. 10. Group work
 students work together on a project or task.11. Mind mapping students create a visual representation of their thoughts andideas.12. Peer feedback students give feedback to each other on their work in order to help improve collaboration and communication. Basic Elements of LearningRead moreRole of a Teacher in a Constructivist ClassroomThe role
of a teacher in a constructivist classroom is to act as a facilitator, rather than a traditional lecturer. This means that the learners to help them constructivist approach is based on the idea that knowledge is not something that
preexists in the world, but is instead something that is created through our interactions with others. As such, the teachers role is to facilitate collaborative learning experiences that help students construct their own knowledge. Behaviorism learning theory in the classroom Read more Strategies to implement constructivism in the classroom There is no
one-size-fits-all answer to the question of how to best implement constructivism in the classroom. However, there are a number of strategies that can be employed to create a constructivism in the classroom. However, there are a number of strategies that can be employed to create a constructivism in the classroom.
questions in order to learn. This strategy allows students to identify and understand the relationships between different pieces of information, as well as develop a deeper understanding of the material they are studying. In my
classroom, I encourage my students to ask questions and explore their curiosities. This helps them to gain a better understanding of the material they are learning and makes it easier for them to retain information. One of the material they are learning and makes it easier for them to gain a better understanding of the material they are learning and makes it easier for them to retain information. One of the key tenets of constructivism is that all students are experts on their own topics and should be allowed to share their knowledges.
and ideas in a fluid, open-ended way. This strategy is important when introducing new concepts, as it allows students to connect the new information with what they already know. Benefits of Differentiated AssessmentRead moreIt also allows students to connect the new information with what they already know. Benefits of Differentiated AssessmentRead moreIt also allows students to connect the new information with what they already know. Benefits of Differentiated AssessmentRead moreIt also allows students to connect the new information with what they already know. Benefits of Differentiated AssessmentRead moreIt also allows students to connect the new information with what they already know. Benefits of Differentiated AssessmentRead moreIt also allows students are supported by the support of the new information with what they already know. Benefits of Differentiated AssessmentRead moreIt also allows students are supported by the support of the new information with what they already know. Benefits of Differentiated AssessmentRead moreIt also allows students are supported by the support of the new information with what they already know. Benefits of Differentiated AssessmentRead moreIt also allows students are supported by the support of the new information with the new informatio
when discussing the concept of gravity, one student might say that it is strange that objects fall towards the ground. Another student might point out that Earths gravity pulls objects towards its center. Together, these two students have created a connection between new information (the concept of gravity) and prior knowledge (their understanding of
how objects behave). This type of interaction is essential for building a strong foundation for learning newconcepts. By allowing your students to make connections between new information and prior knowledge, you are helping them build an understanding of the subject matter. This process will help them learn more quickly and retain information
more efficiently. Benefits of Differentiated InstructionRead more Challenge your students with problems and challenges, and help them solve them in collaboration with others. This is critical in a constructivist classroom. By engaging in problem-solving, your students will build their understanding of the material while also developing critical
thinkingskills. In addition to collaboratively solving problems, have your students share their insights and ideas with one another. Benefits of Instructional classroom management Read more Constructivism is a philosophy of learning that encourages students to construct their own knowledge and understanding, as opposed to relying on preexisting
information. This philosophy can be applied in the classroom by encouraging students to explain their thinking and reasoning aloud as one of the material they are studying and apply it in new and creative ways. Also, by explaining their reasoning aloud,
students can build relationships with classmates and teachers, which can further enhance their learning experience. Constructivism is a theory that teaches that learning occurs through the construction of knowledge. In
order to implement constructivism in the classroom, you need to use a variety of instructional methods and materials. Some of these methods may include hands-on activities, group work, and interactive simulations. By using a variety of techniques, you can help your students build their knowledge in a fun and engaging way. Challenging tasks and
activities are key to promoting creativity, critical thinking, and problem-solving in a classroom setting. By ensuring that is based on collaborative exploration. This type of environment will encourage your students to take ownership of their learning and become
engaged in the process. One way to implement constructivism in the classroom is to provide opportunities for students to revise and reflect on their work. This allows them to engage with their learning and grow as thinkers. It also allows you to track their progress and see how they are adapting their thinking as they learn. This helps you ensure that
your teaching is helping them develop as thinkers. Constructivism is a teaching philosophy that encourages students to construct their own knowledge and understanding of the world around them. It is often implemented in classrooms by encouraging students to think for themselves and come up with their own solutions to problems. By modeling your
own thinking processes aloud, you can help encourage metacognition in your students. This will help them become more self-reliant and able to problem solve on their own. Small group discussions are a great way to help students build their critical
thinking skills. This will allow them to better understand the material they are studying and develop a deeper understanding of it. Additionally, it will help them develop collaboration skills and work together as a team. Constructivism is a model of learning that emphasizes the active construction of knowledge by children and adults. It is based on the
idea that learners construct their own understanding of the world, and that they are actively involved in their ownlearning. One way to implement constructive feedback from their peers. This can be done in a variety of ways, such as having students take turns giving feedback to
another student, or having students share feedback about a task together before completingit. By providing students with constructive feedback, you can help them build stronger relationships and skills in critical thinking and problem-solving. One of the most
important ways to implement constructivism in your classroom is to encourage students to reflect on their learning regularly. This can help you identify what works well for them and helps them become more proactive in their learning. By reflecting on their learning. By reflecting on their learning regularly. This can help you identify what works well for them and helps them become more proactive in their learning.
can be applied in real-world situations. Additionally, it allows you to give feedback that is specific, relevant, and helpful. Assessments can be used as opportunities for students to demonstrate their understanding in multiple ways. This can help you
identify areas where students need more assistance and help them to become more proficient thinkers. Additionally, it can also help you to see how well your curriculum is addressing the concepts that are important for constructivism is a
philosophy that believes that students can learn most effectively by building their own knowledge and understanding of the subject matter. By implementing constructivism into your classroom, you are helping your students to see mistakes as an opportunity to learn. This helps them to be more efficient learners and better problem solvers. One of the
primary tenets of constructivism is creativity. By encouraging students to use their creativity, you are helping them to be more innovative thinkers. For example, if you are teaching math, encouraging your students to use
creativity could mean having them create their own mathematical problems. Main Strengths of Constructivism Learning Theory constructivism is a learning as a journey that is created and shaped by the learners prior experiences, knowledge, and
beliefs. Constructivism is an approach to learning that has been shown to be effective for learners of all ages. The five main strengths of constructivism views learning as a journey, which allows learners to explore and
discover new ideas and concepts at their own pace.3) Constructivism emphasizes the role of prior experiences, knowledge, and beliefs in the learning process, which helps learners to make connections between new and old information.4) The constructivist approach has been shown to be effective for learners of all ages.5) Constructivism views
learning as an ongoing journey, which allows learners to continue to learn and grow throughout their lives. 5 Criticisms of the Constructivism Learning Theory 1. Critics of Constructivism argue that the theory is overly reliant on the idea of constructivism argue that the theory is overly reliant on the idea of constructivism argue that the theory is overly reliant on the idea of constructivism argue that the theory is overly reliant on the idea of constructivism argue that the theory is overly reliant on the idea of constructivism argue that the theory is overly reliant on the idea of constructivism argue that the theory is overly reliant on the idea of constructivism argue that the idea of constructivism 
learning objectives, content knowledge, and disciplinarytraditions. 2. Another criticism is that Constructivism does not offer a clear framework for how to measure student learning, making it difficult to determine if students are actually learning anything. 3. Some argue that the theory does not provide enough opportunities for students to experiment
and try new things, which can lead to boredom and decreasedmotivation. Its focus on learner and doesnt offer students enough opportunities to apply their knowledge in real world settings. Despite these criticisms, Constructivism is too abstract and doesnt offer students enough opportunities to apply their knowledge in real world settings.
centeredness, constructivist learning, and feedback provides educators with a unique perspective on how students learn and helps them to better understand the individualized needs of their pupils. Constructivism has been criticized for a number of reasons. Some believe that the theory does not adequately address the role of the learner in the
learning process. Others argue that constructivism overemphasizes the role of the learning environment in helping students learn. Additionally, some critics believe that constructivism does not provide enough guidance for teachers on how to effectively implement constructivism principles in the classroom. Constructivism has been criticized for a
number of reasons. Some say that it is too learner-centered and does not take into account the role of the teacher in the learning process. Others argue that constructivism does not help students learn content as effectively as other
instructional approaches. Conclusion In conclusion In constructivism is a powerful tool that can be used in the classroom to promote student learning. When implemented correctly, constructivism is not a panacea; it is only
one of many effective instructional approaches. As such, teachers should select the instructional approach that best meets the needs of their students and the objectives of the course. Skip to main contentBrowseInstitutionsLearnersLoginStudy GuidesPhilosophyPsychologyArtPoliticsAnyone who has ever been part of a disagreement can attest to the
simple fact that we all see things differently. Constructivism also sometimes called constructivism is a theory about how we learn, think, and interpret. Constructivist thought is both an epistemology (meaning it investigates the way we come to have
knowledge) and an ontology (telling us about what it is to be). Constructivism is the general methodological position that ideas are built by arranging cognitive building blocks. Formed by experience and social interaction, these building blocks make up ideas, concepts and our understanding of the world. Pam Denicolo, Trevor Long, and Kim Bradley
Cole break this constructivist process down, explaining, Each persons sense of reality is constructed. This construction builds from innumerable persons perception and understanding of an event or behaviour. Since we all have different experiences, each one in turn interpreted through
the results of previous ones, we each construct different realities. (2016)Constructivist Approaches and Research MethodsPam Denicolo, Trevor Long, and Kim Bradley-ColeEach persons sense of reality is constructed. This constructed. This construction builds from innumerable personal experiences over a lifetime, and it then underpins each persons perception and
understanding of an event or behaviour. Since we all have different experiences, each one in turn interpreted through the results of previous ones, we each construct different experiences, each one in turn interpreted through the results of previous ones, we each construct different experiences, each one in turn interpreted through the results of previous ones, we each construct different experiences, each one in turn interpreted through the results of previous ones, we each construct different experiences, each one in turn interpreted through the results of previous ones, we each construct different experiences, each one in turn interpreted through the results of previous ones, we each construct different experiences, each one in turn interpreted through the results of previous ones, we each construct different experiences, each one in turn interpreted through the results of previous ones, we each construct different experiences, each one in turn interpreted through the results of previous ones, we each construct different experiences, each one in turn interpreted through the results of previous ones, we each construct different experiences, each one in turn interpreted through the results of previous ones, we each construct different experiences, each one in turn interpreted through the results of previous ones.
(18591952) asserts that knowledge and learning is not an affair of telling and being told, but an active and constructivism coincided with the Russian Revolution making political and aesthetic statements about the state of modernity
school of thought. Particularly present in the philosophy of science, it relies on the communal aspects of knowledge. Because the scientific method is a collective activity, constructivism offers insight into that process, claiming that facts and ideas are naturally built through interpretation, collaboration, and consensus. One way to understand the
constructivist research position is to examine it in contrast to positivism. Positivism claims that objective reality is out there, that it is knowable, and that it is knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and that it is our task to apprehend this knowable, and the properties of the contract that it is our task to apprehend the contract that it is our task to apprehend the contract that it is our task to apprehend the contract that it is our task to apprehend the contract that it is our task to apprehend the contract that it is our task to apprehend the contract that it is our task to apprehend the contract that it is our task to apprehend the contract that it is our task to apprehend the contract that it is our task to apprehend the contract that it is our task to apprehend the contract that it is our task to apprehend the contract that it is our task to apprehend the contract that it is our task to apprehend the contract that it is our task to apprehend the contract
 positivism and constructivism coincide, their methodologies are at odds. Both posit that the world exists independent of the perceiving mind, but they differ in how they view the task of the scientist/investigator in knowledge acquisition. From the positivist position, constructivism is not empirical enough; it does not measure the truth of something
 based solely on sense experience. On the one hand, constructivism provides a concept of how best to make claims about the world, presenting experience as a crucial component in this endeavor. On the other hand, because constructivism is about assembling reality and knowledge, it gives credence to the inherent property of the mind. This suggests
that the reality of one person will not necessarily match the reality of another. Unlike positivists, who see the primary epistemological task to be the apprehension of objective reality, constructivists see this objective reality as one of several factors that contribute to the building of knowledge. This objective reality does not contain any inherent
meaning instead, we construct meaning through social interactions; through the way we relate to each other. So, for the constructivist, unlike the positivist, there are no necessary universal laws that underpin reality. This makes the constructivist, unlike the positivist, there are no necessary universal laws that underpin reality. This makes the constructivist, unlike the positivist, there are no necessary universal laws that underpin reality. This makes the constructivist, unlike the positivist, unlike the positivist, there are no necessary universal laws that underpin reality. This makes the constructivist, unlike the positivist, unlike the positivist, unlike the positivist method inherently relativist.
its construction. In An Introduction to the Philosophy of Methodology, Kerry E. Howell outlines the implications of constructivism, writing, Constructivism understands reality as being locally constructed and based on shared experiences and, because groups/individuals are changeable, identifies it as relativist realism or relative ontology
 Epistemologically, constructivism is similar to critical theory, however research results are created through constructed and based on
shared experiences and, because groups/individuals are changeable, identifies it as relatives not relative ontology. Epistemologically, constructions, including the constructions of the investigator. (2012)This acknowledges that the
outcome of the constructivist knowledge-building process will vary, contingent on culture, context, and convention. The positivists would see this relativism as a weakness: if we concede that reality is different to different people, how can we ever claim to know anything of the outside world? Constructivists see this relativity as a good thing. According
to them, the more perspectives, positions, and experiences there are, the richer our understanding of the world becomes. In this way, constructivism holds that scientific knowledge is constructed as much by those investigating the world as it is by the world itself. While positivism endeavors to make claims about an objective reality, constructivism
examines reality through its means of constructivisms particular approach to the way that we generate an understanding of the world, it has become important in theories of education and child development. Constructivism posits that children actively compile experiences and pieces of knowledge to comprehend new ideas
Learners do not passively take in new information knowledge is not simply transmitted instead, they build up knowledge through interaction with the world and other people. Constructivism renders learning as an activity, carried out socially. The work of developmental psychologist Jean Piaget (18961980) has been central to constructivist educational
theory. As Ann Marie Halpenny and Jan Pettersen outline, Piaget believed that children were active in constructing their development and their understanding of the environment in which that development was embedded. This perspective on learning as an individual and constructive process was in stark contrast to the passive and deterministic to the passive and de
theories of development that had preceded it. A constructivist perspective emphasises pedagogy where action and self-directed problem-solving are viewed as being central to learning and development. (2013)Introducing PiagetAnn Marie Halpenny and Jan PettersenPiaget believed that children were active in constructing their development and their
understanding of the environment in which that development was embedded. This perspective on learning as an individual and constructive process was in stark contrast to the passive and deterministic theories of development that had preceded it. A constructive process was in stark contrast to the passive and deterministic theories of development that had preceded it.
viewed as being central to learning and development. (2013) Piaget believed that a major part of the learning process was to build the cognitive models, or schemas, that learners can then map their experience and acquired knowledge on to. To trace the development of these models, Piaget first posits, To understand how the budding intelligence
constructs the external world, we must first ask whether the child, in its first months of life, conceives and perceives that have substance, that are permanent and of constructs the external world, we must first ask whether the child, in its first months of life, conceives and perceives that have substance, that are permanent and of constructs the external world, we must first ask whether the child, in its first months of life, conceives and perceives that have substance, that are permanent and of constructs the external world, we must first ask whether the child, in its first months of life, conceives and perceives that have substance, that are permanent and of constructs the external world.
world, we must first ask whether the child, in its first months of life, conceives and perceives that have substance, that are permanent and of constant dimensions. (1954, [2013]) Piaget inevitably found that this was not the case. In conducting aptitude testing on children of various ages, he found that younger children were
prone to making mistakes in answering the same sorts of questions. This proved that children of certain age groups had difficulty understanding certain concepts, leading Piaget to theorize that there are different stages of cognitive development. As we mature, and our cognition progresses, the more we begin to understand. This may seem like an
obvious claim to us now, but this idea of cognitive development shed new light on the process of learning and knowledge acquisition. Halpenny and Pettersen address what this cognitive development looks like, explaining, Within this constructivist approach, Piaget's theory provided a focus on the progression from a concrete world in infancy,
experienced exclusively through the senses and movement to a complex, abstract world in later childhood, where language and symbolic representation facilitate imagination and fantasy. In this way, the child gradually moves beyond the constraints of their own perspective and the presence of the physical environment. (2013)Piaget posits that
children develop schemas, initially in the form of concrete concepts like trees or horses. So, when a child sees a zebra for the first time, they might call it a horse. This is a process Piaget calls assimilation, whereby a child endeavors to fit new experiences into an already existing schema (1954, [2013]). In some instances, this assimilation strengthens
and enriches existing schemas, but in others as exemplified by the zebra it is inaccurate. Eventually, as the childs mind develops, they begin to treat these new experiences differently through a process Piaget calls accommodation (1954, [2013]). Accommodation requires the modification of existing schemas, or the development of new schemas
altogether. The child will see that a zebra does not exactly fit into the category of horse, and so the mind adapts to organize this new experience. Eventually, as Halpenny and Pettersen explain, the child moves from simple, concrete schemas like tree and horse to more abstract schemas, such as love and faith. These processes describe the
constructivist interaction between subject and world. In constructivist concepts of education, it is the child (rather than the teacher or the content) that is placed at the center of the learning process. For constructivists, learning does not happen in the passive reception of experience, but in our reflection, interpretation, and organization of that
experience. For constructivists, this is what the learning process entails. Constructivism also refers to an art movement and a particularly present and recognizable in architecture, sculpture, and painting. Throughout the beginning of the 20th century, the Soviet
avant-garde blazed a trail in the art world with movements such as suprematism, cubism, and Russian futurism. Constructivism was one of these avant-garde moments, spurred by the growing surge of Marxism. It was politically active in the relationship between industry and workers, hoping to embolden social change. Constructivism in art can be
traced back to painter and architect Vladimir Tatlin (18851953). In 1913, after attending art school, Tatlin went to Paris and was inspired by Pablo Picassos reliefs that transcended traditional painting, layering materials to create a three-dimensional form. For example, Picassos guitar reliefs (figure 1) show the metaphorical deconstruction and
reconstruction of the instrument in a variety of materials that played with dimension and negative space, rendering everyday objects as never before seen sculptural works. Figure 1, Pablo Picasso (1914) Guitar [cardboard, paper, string, wire] (Photographed by Nika Vee, 2008, Flickr) Back in Moscow, Tatlin created his own painting reliefs,
precipitating the constructivist movement. His abstract composition, Corner Counter-Relief (fig. 2), was featured in The Last Futurist Exhibition of Paintings in 1915, held in Petrograd (modern day Saint Petersburg). Figure 2, Vladimir Tatlin (1915) Corner Counter-Relief (mixed materials) (Photographed by Shakko, 2021, Wikimedia Commons). This
piece is made of mixed materials wood, copper, and wire traversing the space where two walls meet to create a corner. In reference to Tatlins works like Corner Counter-Relief, Anna Moszynska describes the effect of constructivism, writing, By being literally suspended in the air, piercing and cutting into the space around them, these complex reliefs
repudiated the flat, two-dimensional surface (or wall) from which reliefs had projected in the past. At the same time, the interpenetration of planes challenged traditional concepts of sculptural mass, while the new technique of construction replaced the standard techniques of carving and modelling. Although Picasso had pioneered these methods in
his own reliefs, Tatlin was important for showing that the depiction of objects could be transcended by a concern with real materials. (2021)Abstract ArtAnna MoszynskaBy being literally suspended in the air, piercing and cutting into the space around them, these complex reliefs repudiated the flat, two-dimensional surface (or wall) from which reliefs
had projected in the past. At the same time, the interpenetration of planes challenged traditional concepts of sculptural mass, while the new technique of carving and modelling. Although Picasso had pioneered these methods in his own reliefs, Tatlin was important for showing that the depiction of
objects could be transcended by a concern with real materials. (2021) Tatlins Corner Counter-Relief inspired artists like Ella Bergmann-Michel (18961971), John Ernest (19221994), and Naum Gabo (18901977), making constructivism an international aesthetic movement. Generally speaking, constructivist art was stripped back, austere, and
built engineered, even corroding the boundaries between art and industrialism. The term constructivism elucidates an artistic method whereby the artist enacts the reality-building process posited by constructivism elucidates an artistic method whereby the artist enacts the rew materials can be understood as our experiences, while the finished sculptural pieces
represent the schemas that construct our reality. In more recent years, constructivism has become a theory used in contemporary political thought. When the sociological idea of constructivism has become a theory used in contemporary political thought.
holds that reality is the collaboration between the objective world and socially constructed mental categories. While some theories like realism and liberalism propose that it is primarily material conditions that determine by social
convention or ideation. Once again, there is not an objective truth that can be apprehended under this theory, rather a truth that is subjectively constructed. These ideas become clear when we examine the different international relations approaches to the threat of anarchy. Realism posits that anarchy is the reason for conflict between states, and
liberalism holds that anarchy is the reason for the cooperation of states. Constructivism is one response to these classical theories. In International Relations Theory, Cynthia Weber explains: Anarchy is neither necessarily conflictual nor cooperative. There is no nature to international anarchy. Constructivism disagrees with both these classical
theories. (2021)Led by political scientist Alexander Wendt, constructivists hold instead that anarchy is what states make of it (1992). Anarchy is not seen as a pre-established fact in the world it has no innate nature instead, it is constructed by states. Weber illustrates what can be gained from this constructivist perspective, writing, It is what states do
that we must focus on to understand conflict and cooperation in international anarchy. States determine the nature of international anarchy. States determine the nature of international anarchy. States determine the nature of international anarchy.
interests change. (2021)The broader implication here is that states are not driven by material circumstance by the way things are in the objective world but rather by social norms, conventions, and unique experiences a given
state may have. This is an example of the way in which constructivism is a philosophical framework that can be applied on a large scale to the way we conceive of our global relationships. Constructivism is a philosophical framework that can be applied on a large scale to the way we conceive of our global relationships. Constructivism explains the interaction between the subjective and objective world as an ongoing activity of interpretation and assimilation. It claims that knowledge the way in which constructivism explains the interaction between the subjective world as an ongoing activity of interpretation and assimilation.
is the result of a collaboration between the outside world and subjective schema, built socially and communally. Constructivism has a strong presence in philosophy, psychology, education, art, and politics and continues to be relevant in new fields. With the rise of social media, for example, constructivism can offer a useful framework through which to
consider the way interactions and communities have changed. In Constructivism Reconsidered in the Age of Social Media, Chris Stabile and Jeff Ershler map constructivism onto the way we interact online, proposing, This creation of knowledge functions virally; as knowledge is shared, meanings can change as each learner synthesizes his or her
perspective into the learning process. The method in which ideas and assumptions are created as a result of this interaction can be explained through memes. (2015)Constructivism Reconsidered in the Age of Social MediaChris Stabile and Jeff ErshlerThis creation of knowledge functions virally; as knowledge is shared, meanings can change as each
learner synthesizes his or her perspective into the learning process. The method in which ideas and assumptions are created as a result of this interaction can be explained through memes. (2015)Social media provides an example of the way that constructivism can be implemented in contemporary times. Although technological advancements pose
new challenges for constructivism with the dissemination of doctored images and fake news, for example constructivism hopes to establish is that knowledge is part of a unique process and reality is something in constant flux. As a relativist philosophy itself,
constructivism invites us to constantly reassess and reformulate its uses and applications, proving to be as relevant in the age of technology as ever before. The History and Philosophy of Science (2018), edited by Larry A. Hickman, Stefan
Neubert, and Kersten ReichSoviet Architectural Avant-Gardes (2020) by Danilo Udoviki-SelbSocial Constructivism as Paradigm? The Legacy of The Social Constructivist International Relations (2014) by Audie Klotz and Cecelia M.
LynchPresent in philosophy, psychology, education, politics, and art, constructivism is a theory about how we learn, think, and interpret. Constructivism is the general methodological position that ideas are built by arranging cognitive building blocks, formed by experience and social interaction. Constructivism describes a research method used in the
philosophy of science. Because the scientific method is a collective activity, constructivism offers insight into that process, claiming that facts and ideas are naturally built through interpretation, collaboration, and consensus. Constructivism posits that children are actively compiling experiences and pieces of knowledge to comprehend new ideas
Learners do not passively take in new information knowledge is not simply transmitted instead, they build up knowledge through interaction with the world and other people. Geometric shapes and colorsDenicolo, P., Long, T. and Bradley-Cole, K. (2016)
Constructivist Approaches and Research Methods. SAGE Publications. Available at: J. (2013) Introducing Piaget. Taylor and Education by John Dewey. Myers Education to the Philosophy of Methodology. SAGE Publications. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor and Francis. Available at: A. M. and Pettersen, J. (2013) Introducing Piaget. Taylor at: A. M. and Pettersen, J. (2013) Introducing Piaget. Tay
(2021) Abstract Art. 2nd edn. Thames and Hudson Ltd. Available at: C. (2013) The Construction Of Reality In The Child. Taylor and Francis. Available at: C. (2021) International Relations Theory. 5th edn. Taylor and Francis. Available at: A
(1992). Anarchy is what states make of it: the social construction of power politics, in International Organization, 46(2), 391425. Available at: P. (1914) Guitar [cardboard, paper, string, wire] (Photographed by Shakko, 2021, Wikimedia Commons)Dr
Aoiffe WalshPhD, Media Arts (Royal Holloway, University of London) AoiffeWalsh has a PhD in Media Arts from Royal Holloway, University of London. With a background in film studies and philosophy, her current research explores British literary modernism, with a particular focus on surrealism between the wars. She has lectured and published
pieces on documentary and film theory, film history, genre studies and the avant-garde. Constructivism in education has roots in Epistemology. The learner has prior knowledge and experiences, which is often determined by their experiences.
 While the Behaviorist school of learning may help understand what students are doing, educators also need to know what students are thinking. Constructivism can be traced back to educational psychology in the work of Jean Piaget (18961980) identified with Piagets theory of cognitive development
Piaget focused on how humans make meaning in relation to the interaction between their experiences and their ideas. His views tended to focus on human development in relation to what is occurring with an individual as distinct from development influenced by other persons. Lev Vygotsky (1896-1934) social constructivism emphasized the
importance of sociocultural learning; how interactions with adults, more capable peers, and cognitive tools are internalized by learners to form mental constructs through the zone of proximal development. Expanding upon Vygotskys theory Jerome Bruner and other educational psychologists developed the important concept of instructional
scaffolding, whereby the social or informational environment offers supports (or scaffolds) for learning that are gradually withdrawn as they become internalized. Views more focused on human development in the context of the social world include the social world include the social world include the social or informational environment offers supports (or scaffolds) for learning that are gradually withdrawn as they become internalized. Views more focused on human development in the context of the social world include 
of Mikhail Bakhtin, Jean Lave and Etienne Wenger; Brown, Collins and Duguid; Newman, Griffin and Cole, and Barbara Rogoff. The concept of constructivism has influenced a number of disciplines, including psychology, sociology, education and the history of science. During its infancy, constructivism examined the interaction between human
experiences and their reflexes or behavior-patterns. Piaget called these systems of knowledge schemes are not to be confused with schema, a term that comes from schema theory, which is from information-processing perspectives on human cognition. Whereas Piagets schemes are content-free, schemata (the plural of schema) are concepts
for example, most humans have a schema for grandmother, egg, or magnet. Constructivism does not refer to a specific pedagogy, although it is often confused with constructivist and experiential learning ideas of Piaget. Piagets theory of constructivist learning has had
wide-ranging impact on learning theories and teaching methods in education, and is an underlying theme of education reform movements. Research support and others constructivist results. See also: Education From Cradle To Grave and Education of
Young PeopleHistoryEarlier educational philosophies did not place much value on what would become constructivist ideas; childrens play and exploration were seen as aimless and of little importance. Jean Piaget did not agree with these traditional views; he saw play as an important and necessary part of the students cognitive development and
provided scientific evidence for his views. Today, constructivist theories are influential throughout the formal sectors. In museum education, constructivist theories inform exhibit design. One good example of constructivist theories inform exhibit design. One good example of constructivist theories are influential throughout the formal sectors. In museum education, constructivist theories inform exhibit design.
 visitors are encouraged to explore a collection of real natural history specimens, to practice some scientific skills and make discoveries for themselves. Writers who influenced constructivism include: John Dewey (18591952) Maria Montessori (18701952) Wadysaw Strzemiski (18931952) Jean Piaget (18961980) Lev Vygotsky (18961934) Heinz von
Foerster(19112002)George Kelly(19051967)Jerome Bruner(19152016)Herbert Simon(19162001)Paul Watzlawick(19212007)Ernst von Glasersfeld(19172010)Edgar Morin(* 1921)Humberto Maturana(* 1928)IndividualMain article: What is Knowledge?See also: WISDOM: The Highest Aim of Life and Higher Education and Ilm (Knowledge)Jean Piaget
ofassimilation and accommodation that are key in this interaction as individuals construct new knowledge from their experiences. When individuals assimilatenew information, they incorporate it into an already existing framework without changing that framework. This may occur when individuals experiences are aligned with their internal
representations of the world, but may also occur as a failure to change a faulty understanding; for example, they may not notice events, may misunderstand input from others, or may decide that an event is aflukeand is therefore unimportant as information about the world. In contrast, when individuals experiences contradict their internal
the expectation that the world operates in one way and it violates our expectations, we often fail, but by accommodating this new experience and reframing our model of the way the world works, we learn from the experience and reframing our model of the way the world works, we learn from the experience and reframing our model of the way the world works, we learn from the experience and reframing our model of the way the world works, we learn from the experience and reframing our model of the way the world works, we learn from the experience and reframing our model of the way the world works, we learn from the experience and reframing our model of the way the world works, we learn from the experience and reframing our model of the way the world works, we learn from the experience and reframing our model of the way the world works, we learn from the experience and reframing our model of the way the world works.
theory describing how learning happens, regardless of whether learners are using their experiences to understand a lecture or following the instructions for building amodel airplane. In both cases, the theory of constructivism is often associated with
pedagogic approaches that promote active learning, or learning by doing. There are many critics of learning by doing (a.k.a. discovery learning) as an instructional strategy (e.g. see the criticisms below). While there is much enthusiasm for constructivism as adesign strategy, according to Tobias and Duffy to us it would appear that constructivism
remains more of a philosophical framework than a theory that either allows us to precisely describe instructivism not only acknowledges the uniqueness and complexity of the learner, but actually encourages, utilizes and rewards it as an
 integral part of the learning process. The importance of the background and culture of the learner social constructivisms or socioculturalism encourage the learner or learner or learner or learner or learners to arrive at his or her version of the truth, influenced by his or her background, culture or embedded worldview. Historical developments and symbol systems, such as language the learner or learners to arrive at his or her version of the truth, influenced by his or her version of the truth.
logic, and mathematical systems, are inherited by the learner as a member of a particular culture and these are learned throughout the learners social interaction with knowledgeable members of the society. Without the social interaction with other more knowledgeable people, it is
impossible to acquire social meaning of important symbol systems and learn how to utilize them. Young children develop their thinking abilities by interacting with other children, adults and the physical world. From the social constructivist viewpoint, it is thus important to take into account the background and culture of the learner throughout the
learning process, as this background also helps to shape the knowledge and truth that the learning process. Responsibility for learning should reside increasingly with the learner. Social constructivism thus emphasizes the importance of the learner
being actively involved in the learning process, unlike previous educational viewpoints where the responsibility rested with the instructor to teach and where the learner played a passive, receptive role. Von Glasersfeld (1989) emphasized that learners construct their own understanding and that they do not simply mirror and reflect what they read.
Learners look for meaning and will try to find regularity and order in the events of the world even in the absence of full or complete information. The Harkness discussion method because it was developed at Phillips Exeter Academywith funds donated in the 1930sby Edward Harkness. This is also named after
the Harkness table and involves students seated in a circle, motivating and controlling their own discussion. The teacher acts as little as possible. Perhaps the teachers only function is to observe, although he/she might begin or shift or even direct a discussion. The students get it rolling, direct it, and focus it. They act as a team, cooperatively, to make
it work. They all participate, but not in a competitive way. Rather, they all share in the responsibility and the goals, much as any members share in any team sport. Although the goals of any discussion will change depending upon whats under discussion, some goals will always be the same: to illuminate the subject, to unravel its mysteries, to interpret
and share and learn from other points of view, to piece together the puzzle using everyones contribution. Discussion skills are important. Everyone must be aware of how to get this discussion rolling and keep it rolling and interesting. Just as in anysport, a number of skills are necessary to work on and use at appropriate times. Everyone is expected to
contribute by using these skills. The motivation for learning Another crucial assumption regarding the nature of the learner concerns the level and source of motivation for learning. According to Von Glasersfeld, sustaining motivation to learn is strongly dependent on the learners confidence in his or her potential for learning. These feelings of
competence and belief in potential to solve new problems, are derived from first-hand experience of mastery of problems in the past and are much more powerful than any external acknowledgment and motivation. This links up with Vygotskys zone of proximal development where learners are challenged within close proximity to, yet slightly above,
their current level of development. By experiencing the successful completion of challenging tasks, learners gain confidence and motivation to embark on more complex challenges. The role of facilitators are facilitators as facilitators.
teachers. Whereas a teacher gives adidactic lecture that covers the subject matter, a facilitator helps the learner plays a passive role and in the learner plays an active role in the learning process. The emphasis thus turns away from the
instructor and the content, and towards the learner. This dramatic change of role implies that a facilitator needs to display a totally different set of skills than that of a teacher gives answers according to a set curriculum, a facilitator
provides guidelines and creates the environment for the learner to arrive at his or her own conclusions; a teacher mostly gives amonologue, a facilitator is in continuous dialogue with the learning experience in mid-air by taking the initiative to steer the learning experience to where the learners.
want to create value. The learning environment should also be designed to support and challenge the learner in becoming an effective thinker. This
can be achieved by assuming multiple roles, such asconsultantandcoach. A few strategies for cooperative learning include: Reciprocal Questioning: students become experts on one part of a group project and teach it to the others in their groupStructured Controversies: Students
work together to research a particular controversyLearning is an active processSocial constructivism, strongly influenced by Vygotskys (1978) work, suggests that knowledge is first constructivism, strongly influenced by Vygotskys (1978) work, suggests that knowledge is first constructivism, strongly influenced by Vygotskys (1978) work, suggests that knowledge is first constructivism, strongly influenced by Vygotskys (1978) work, suggests that knowledge is first constructivism, strongly influenced by Vygotskys (1978) work, suggests that knowledge is first constructivism.
collaborative elaboration results in learners constructing understanding together that wouldn't be possible alone. Social constructivist scholars view learning as an active process where learners should learn to discover principles, concepts and facts for themselves, hence the importance of encouraging quesswork and intuitive thinking in learners. In
fact, for the social constructivist, reality is not something that we can discover because it does not pre-exist prior to our social invention of it. Kukla (2000) argues that reality is constructed by our own activities and that people, together as members of a society, invent the properties of the world. Other constructivist scholars agree with this and
emphasize that individuals make meanings through the interactions with each other and with the environment they live in. Knowledge is thus a product of humans and is socially and culturally constructed. McMahon (1997) agrees that learning is a social process. He further states that learning is not a process that only takes place inside our minds,
nor is it a passive development of our behaviors that is shaped by external forces. Rather, meaningful learning occurs when individuals are engaged in social activities. Vygotsky (1978) also highlighted the convergence of the social activities.
occurs when speech and practical activity, two previously completely independent lines of development, converge. Through practical activity a child constructs meaning on anintra-personal level, while speech connects this meaning with the interpersonal world shared by the child and her/his culture. Good relationship between instructor and learner A
further characteristic of the role of the facilitator in the social constructivist viewpoint, is that the instructors and background become an essential part of the
interplay between learners and tasks in the shaping of meaning. Learners compare their version of truth (Kukla 2000). The task or problem is thus the interface between the instructor and the learners to get to a new, socially testedversion of truth (Kukla 2000). The task or problem is thus the interface between the instructor and the learners to get to a new, socially testedversion of truth (Kukla 2000).
instructor and learner. This entails that learners and instructors should develop an awareness of each others viewpoints and then look to their own beliefs, standards and values, thus being both subjective at the same time. Some studies argue for the importance of mentoring in the process of learning. The social constructivist model thus
emphasizes the importance of the relationship between the student and the instruction approaches that could harbour this interactive learning process. Some learning approaches that involve
learning with others. Collaboration among learners Main article: Learning by teaching Learners with different skills and backgrounds should collaboration among learners with different skills and backgrounds should collaborate in tasks and discussions to arrive at a shared understanding of the truth in a specific field. Some social constructivist models also stress the need for collaboration among learners, in direct
contradiction to traditional competitive approaches. One Vygotskian notion that has significant implications for peer collaboration, is that of the zone of proximal development. Defined as the distance between the actualdevelopment as determined through
problem-solving under adult guidance or in collaboration with more capable peers, it differs from the limitations of physical mature of process of scaffolding a learner can be extended beyond the limitations of physical mature of process of scaffolding a learner can be extended beyond the limitations of physical mature of process. If students are not process of scaffolding a learner can be extended beyond the limitations of physical mature of phy
have to present and train new contents with their classmates, anon-linear process of collective knowledge-construction will be set up. The importance of context in which the learning itself. Underlying the notion of the learning itself. Underlying the notion of the learning itself.
that there is no one set of generalised learning laws with each law applying to all domains. Decontextualised knowledge does not give us the skills to apply our understandings to authentic tasks because we are not working with the complex environment that determine
how and when the concept is used. One social constructivist notion is that of authentic orsituated learning, where the student takes part in activities directly relevant to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and that take place within a culture similar to the application of learning and take place within a culture similar to the application of learning and take place within a cu
learning that attempts to enculturate students into authentic practices through activity and social interaction in a way similar to that evident, which is a way of assessing the true potential of learners that differs significantly
from conventional tests. Here, the essentially interactive nature of learning is extended to the process of assessment as a process involving interaction between both instructor and learner. The role of the assessor becomes one of entering
into dialogue with the persons being assessed to find out their current level of performance on any task and sharing with them possible ways in which that performance might be improved on a subsequent occasion. Thus, assessment and learning are seen as inextricably linked and not separate processes. According to this viewpoint, instructors should be improved on a subsequent occasion.
see assessment as a continuous and interactive process that measures the achievement of the learning experience and courseware. The feedback created by the assessment process serves as a direct foundation for further development. The selection, scope, and sequencing of the subject matterKnowledge should be
discovered as an integrated whole. This also again underlines the importance of the context in which learning is presented. The world, in which the learner needs to operate, does not approach one in the form of different subjects.
but as a complex myriad of facts, problems, dimensions, and perceptions. Engaging and challenging the learner confidence. This is in line
with Vygotskys zone of proximal development, which can be described as the distance between the actual development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) and the level of potential development (as determined by independent problem-solving) are determined by independent problem-solving (as determined by independent problem-solving) are determined by independent problem-solving (as determined by independent problem-solving) are determined by independent problem-solving (as determined by independent problem-solving) are determined by independent problem-solving (as determined by independent problem-solving).
claimed that instruction is good only when it proceeds ahead of development. It is in this way that instruction plays an extremely important role in development. To fully engage and challenge the learner, the task and
learning environment should reflect the complexity of the environment that the learner should be able to function in at the end of learning. Learners must not only have ownership of the learning or problem-solving process, but of the problem itself. Where the sequencing of subject matter is concerned, it is the constructivist viewpoint that the
foundations of any subject may be taught to anybody at any stage in some form. This means that instructors should first introduce the basic ideas that give life and form to any topic or subject area, and then revisit and build upon these repeatedly. This notion has been extensively used in curricula. It is important for instructors to realize that although
a curriculum may be set down for them, it inevitably becomes shaped by them into something personal that reflects their own belief systems, their thoughts and feelings about both the contexts of those involved in the
learning process must therefore be considered as an integral part of learning process. Savery (1994) contends that the more
structured the learning environment, the harder it is for the learning experience just enough to make sure that the students get clear guidance and parameters within which to achieve the learning experience just enough to make sure that the students get clear guidance and parameters within which to achieve the learning experience just enough to make sure that the students get clear guidance and parameters within which to achieve the learning experience just enough to make sure that the students get clear guidance and parameters within which to achieve the learning experience should
be open and free enough to allow for the learning Constructivist ideas have been used to informadult education. Current trends in higher education push for more active learning teaching approaches which are often based on constructivist
views. Approaches based on constructivism stress the importance of mechanisms for mutual planning, diagnosis of learner needs and interests, cooperative learning objectives, formulation oflearning objectives, formulation oflearning climate, sequential activities for achieving the objectives, formulation of learning of mechanisms for mutual planning, diagnosis of learning objectives, formulation obje
of personal relevance of the content, involvement of the learner in the process, and deeper understanding of underlying concepts, all of these are principles that may benefit learners of all ages as even children connect their every day experiences to what they learn. Pedagogies based on constructivism Main article: Constructivist teaching
methodsVarious approaches in pedagogy derive from constructivist theory. They usually suggest that learning is accomplished best using a hands-on approach. Learners learn by experimentation, and not by being told what will happen, and are left to make their owninferences, discoveries and conclusions. Supportive research and evidence Teaching
school kidsHmelo-Silver, Duncan, & Chinn cite several studies supporting the success of the constructivist problem-based and inquiry learning methods. For example, they describe a project called GenScope, an inquiry-based science software showed significant gains over the control groups, with
the largest gains shown in students from basic courses. Hmelo-Silver et al. also cite a large study by Geier on the effectiveness of inquiry-based science for middle school students, as demonstrated by their performance on high-stakes standardized tests. The improvement was 14% for the first cohort of students and 13% for the second cohort. This
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study also found that inquiry-based teaching methods greatly reduced the achievement gap for African-American students. Guthrie et al. (2004) compared three instruction only approach, and an approach with strategies instruction and constructivist motivation
techniques including student choices, collaboration, and hands-on activities. The constructivist approach, called CORI (Concept-Oriented Reading Instruction), resulted in better student reading comprehension, cognitive strategies, and motivation. Jong Suk Kim found that using constructivist teaching methods for 6th graders resulted in better student
achievement than traditional teaching methods. This study also found that students preferred constructivist methods over traditional ones. However, Kim did not find any difference in student self-concept or learning strategies between those taught by constructivist or traditional methods. Doru and Kalender compared science classrooms using
traditional teacher-centered approaches to those using student-centered, constructivist methods. In their initial test of student performance immediately following the lessons, they found no significant difference between traditional and constructivist methods. However, in the follow-up assessment 15 days later, students who learned through
constructivist methods showed better retention of knowledge than those who learned through traditional methods. CriticismSeveral cognitive psychologists and educators have questioned the central claims of constructivism. It is argued that constructivist theories are misleading or contradict known findings. Matthews (1993) attempts to sketch the
influence of constructivism in current mathematics and science education, aiming to indicate how pervasive Aristotles empiricist epistemology is within it and what problems constructivism faces on that account. In the neo-Piagetian theories of cognitive development it is maintained that learning at any age depends upon the processing and
representational resources available at this particular age. That is, it is maintained that if the requirements of the concept to be understood exceeds the available processing efficiency and working memory resources then the concept to be understood exceeds the available at this particular age. That is, it is maintained that if the requirements of the concept to be understood exceeds the available processing efficiency and working memory resources then the concept to be understood exceeds the available processing efficiency and working memory resources then the concept to be understood exceeds the available processing efficiency and working memory resources then the concept to be understood exceeds the available processing efficiency and working memory resources then the concept to be understood exceeds the available processing efficiency and working memory resources the available processing efficiency and available processing e
theoretical concepts or, in other words, reasoning. Therefore, no matter how active a child is during learning environment that meets the developmental and individual learning environment that meets the developmental and individual learning constraints that are characteristic for the childs age and this condition is notice a child is during learning that are characteristic for the childs age and this childs age and this childs age and this condition is noticed.
met, construction goes astray. Several educators have also questioned the effectiveness of this approach toward instructional design, especially as it applies to the development of instructional strategy argue that little empirical evidence
exists to support this statement given novice learners. Sweller and his colleagues argue that novices do not possess the underlying mental models, or schemas necessary for learning by doing. Indeed, Mayer (2004) reviewed the literature and found that fifty years of empirical data do not support using the constructivist teaching technique of pure
discovery; in those situations requiring discovery, he argues for the use of guided discovery instead. Mayer (2004) argues that not all learners, suggesting many educators misapply constructivism are efficient or effective for all learners to be behaviorally active. He
describes this inappropriate use of constructivism as the constructivist teaching fallacy. I refer to this interpretation as the constructivist teaching fallacy because it equates active during learning and that instructors use guided practice. In contrast, Kirschner
et al. (2006) describe constructivist teaching methods as unguided methods of instruction. They suggest more structured learning activities for learners with little to no prior knowledge. Slezak states that constructivism is an example of fashionable but thoroughly problematic doctrines that can have little benefit for practical pedagogy or teacher
education. Similar views have been stated by Meyer, Boden, Quale and others. Kirschner et al. group a number of learning theories together (Discovery, Problem-Based learning and inquiry learning are ineffective. Kirschner et al.
described severalresearch studies that were favorable to problem-based learning given learners were provided some level of guidance and support. A rebuttal to the criticisms of Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critics of the Kirschner, Sweller, and ClarkWhile there are critical cri
designs for producing procedural learning (learning as behavior change); their grouping of seemingly disparate learning theories and; a continuum of guidance beginning with worked examples that may be followed by practice, or transitioned to practice (Renkl, Atkinson, Maier, and Staley, 2002) Kirschneret al. (2006) describe worked examples as an
instructional design solution for procedural learning. Clark, Nguyen, and Sweller (2006) describe this as a very effective, empirically validated method of teaching learners procedural skill acquisition. Evidence for learning by studying worked-examples, is known as theworked-example effectand has been found to be useful in many domains (e.g.
music, chess, athletics)concept mapping, geometry, physics, mathematics, or programming. Kirschneret al. (2006) describe why they group a series of seemingly disparate learning theory promotes the same
constructivist teaching technique learning by doing. While they argue learning by doing is useful for more knowledgeable learners, they argue this teaching technique is not useful for movices. Mayer states that it promotes behavioral activity too early in the learning process, when learners should be cognitively active. In addition, Sweller and his
associates describe a continuum of guidance, starting with worked examples to slowly fade guidance fading effect, the guidance fading effect, the guidance fading effect, and the expertise-reversal effect. Criticism of discovery-based teaching techniques for the guidance fading effect, and the expertise-reversal effect. Criticism of discovery-based teaching techniques for the guidance fading effect, and the expertise-reversal effect.
century of advocacy associated with instruction using minimal guidance, there appears no body of research supporting the technique. In so far as there is any evidence from controlled studies, it almost uniformly supports direct, strong instructional guidance rather constructivist-based minimal guidance during the instruction of novice to intermediate
learners. Even for students with considerable prior knowledge, strong guidance while learning is most often found to be equally effective; there is also evidence that it may have negative results when students acquire misconceptions or incomplete or disorganized
knowledgeWhy Minimal Guidance During Instruction Does Not Work: An Analysis of the Failure of Constructivist, Discovery, Problem-Based, Experiential, and Inquiry-Based Teaching by Kirschner, Sweller, ClarkMayer (2004) argues against discovery-based teaching techniques and provides an extensive review to support this argument. Mayers
arguments are against pure discovery, and are not specifically aimed at construction or against using hands-on inquiry or group discussion that promotes the process of knowledge construction in learners. The main conclusion I draw from
the three research literatures I have reviewed is that it would be a mistake to interpret the current constructivist view of learning as a rationale for reviving pure discovery-based teaching techniques. He provides empirical research as evidence that discovery-based teaching
techniques are inadequate. Here he cites this literature and makes his point For example, a recent replication is research showing that students learn to become better at solving. Todays proponents of discovery methods
who claim to draw their support from constructivist philosophy, are making inroads into educational practice. Yet a dispassionate review of the relevant research literature shows that discovery-based practice is not as effective as guided discovery-based teaching
techniques. He proposes that the instructional design recommendations of constructivism are too often aimed at discovery-based practice. Sweller (1988) found evidence that practice by novices during early schema acquisition, distracts these learners with unnecessary search-based activity, when the learners attention should be focused on
understanding (acquiring schemas). The study by Kirschner et al. from which the quote at the beginning of this section was taken has been widely cited and is important for showing the limits of minimally-guided instruction. Hmelo-Silver et al. responded, pointing out that Kirschner et al. conflated constructivist teaching techniques such as inquiry
learning with discovery learning. (See the preceding twosections of this article.) This would agree with Mayers viewpoint that even though constructivism as a theory and teaching techniques incorporating guidance are likely valid applications of this theory, nevertheless a tradition of misunderstanding has led to some question pure discovery
techniques. The math wars and discovery-based teaching techniques the implementation of constructivist-inspired curricula in schools. In the 1990s, mathematics textbooks based on new standards largely informed by constructivism were
developed and promoted with government support. Although constructivist theory does not require eliminating instruction entirely, some textbooks that omitted or de-emphasized instruction of standard mathematical methods. Supporters
responded that the methods were to be eventually discovered under direction by the teacher, but since this was missing or unclear, many insisted the textbooks were designed to deliberately eliminate instruction of standard methods. In one commonly adopted text, the standard formula for the area of a circle is to be derived in the classroom, but not
actually printed in the student textbook as is explained by the developers of CMP: The student role of formulating, communicating, and reflecting on ideas leads to an increase in learning. If the format of the texts included many worked examples, the student role would then become merely reproducing these examples with
small modifications. Similarly, this approach has been applied to reading withwhole languageand inquiry-based science that emphasizes the importance ofdevisingrather than just performing hands-on experiments as early as theelementary grades (traditionally done by research scientists), rather than studying facts. In other areas of curriculum such
associal studies and writing are relying more on higher order thinking skills rather than memorization of dates, grammarors pellingrules or reciting correct answers. Advocates of this approach counter that the constructivism does not require going to extremes, that in fact teachable moments should regularly infuse the experience with the more
traditional teaching. The primary differentiation from the traditional approach being that the engagement of the students in their learning makes them more receptive to learning things at an appropriate time, rather than on a preset schedule. Importance of structure in constructivist learning environments During the 1990s, several theorists began to
study the cognitive load of novices (those with little or no prior knowledge of the subject matter) during problem solving. Cognitive load theory was applied in several contexts. Based on the results of their research, these authors do not support the idea of allowing novices to interact with ill-structured learning environments. Ill-structured learning
environments rely on the learner to discover problem solutions. Jonassen (1997) also proposed well-structured learning environments provide scaffolding for problem-solving. Finally, both Sweller and Jonassen support problem-solving
scenarios for more advanced learners. Sweller and his associates even suggest well-structured learning environments, like those provided by worked examples initially, with a gradual introduction
of problem solving scenarios; this is described as the guidance fading effect Each of these ideas provides more evidence for Andersons ACT-R framework. This action of psychology is to help move educational reform efforts from the fuzzy and
unproductive world of educational ideologywhich sometimes hides under the banner of various versions of constructivist and maturationist viewsMany people confuse constructivist with maturationist views. The constructivist (or
cognitive-developmental) stream is based on the idea that the dialectic or interactionist process of development and learning through the students active construction should be facilitated and promoted by adults. Whereas, The romantic maturationist stream is based on the idea that the students naturally occurring development should be allowed to
flower without adult interventions in a permissive environment. In other words, adults play an active role in guiding learning in constructivism. Radical constructivism by coupling Piagets theory of learning and
philosophical viewpoint about the nature of knowledge as an attempt to generate ideas that match an independent, objective reality. Instead, theories and knowledge about the world, as generated by oursensesand
reason, either fit within the constructivism of whatever reality may exist and, thus, are viable or do not and are not viable. As a theory of education, radical constructivism emphasizes the experiences between learners and the importance of uncertainty. Relational constructivism emphasizes the experiences between learners and the importance of uncertainty. Relational constructivism emphasizes the experiences between learners and the importance of uncertainty. The constructivism emphasizes the experiences of the learner of uncertainty. The constructivism emphasizes the experiences of the learner of uncertainty. The constructivism emphasizes the experiences of the learner of uncertainty. The constructivism emphasizes the experiences of the learner of uncertainty. The constructivism emphasizes the experiences of the learner of uncertainty. The constructivism emphasizes the experiences of the learner of uncertainty. The constructivism emphasizes the experience of uncertainty experiences of the learner of uncertainty. The constructivism emphasizes the experience of uncertainty experiences of the learner of uncertainty experiences of uncertainty experiences of the learner of uncertainty experiences of un
perceived as a relational consequence of radical constructivism. In contrast to social constructivism, it picks up the epistemological threads and maintains the radical constructivism focuses on the
relational conditions that apply to human perceptional processes. Social constructivismIn recent decades, constructivist theorists have extended the traditional focus on individual learning to address collaborative and social dimensions of learning. It is possible to seesocial constructivism as a bringing together of aspects of the work of Piaget with that
of Bruner and Vygotsky. Communal constructivism Was developed by Leask and Younie in 1995 through their research on the European SchoolNetwhich demonstrated the value of experts rather than
social construction of knowledge as described by Vygotsky where there is a learner to teacher scaffolding relationship. Communal constructivism as a concept applies to those situations in which there is currently no expert knowledge or research to underpin knowledge in an area. Communal constructivism refers specifically to the process of experts
working together to create, record and publish new knowledge in emerging areas. In the seminal European SchoolNet research where for the first time academics were testing out how the internet could support classroom practice and pedagogy, experts from a number of countries set up test situations to generate and understand new possibilities
for educational practice. Bryn Holmes in 2001 applied this to students will not simply pass through a sieve but instead leave their own imprint in the learning process. Influence on computer science and robotics Constructivism has influenced the course of
programming and computer science. Some famous programming languages have been created, wholly or in part, for educational use, to support the constructivism has also informed the design of interactive
machine learning systems, whereas Radical Constructivism has been explored as a paradigm to design experiments in rehabilitation robotics, more precisely in prosthetics. Adapted from Wikipedia, the free encyclopedia The constructivist theory is based around the idea that learners are active participants in their learning journey; knowledge is
constructed based on experiences. As events occur, each person reflects on their experience and incorporates the new ideas with their prior knowledge. Learners develop schemas to organize acquired knowledge. This model was entrenched in learning theories by Dewey, Piaget, Vygotsky, Gagne, and Bruner. See also: Cognitive ApprenticeshipThe
theory of constructivist learning is vital to understanding how students actively construct knowledge is central to constructivism. Students add (or build) their new experiences on top of their current foundation of understanding. As stated by Woolfolk (1993) learning is active mental work, not passive reception of
teaching. As an educator, it is important to understand the theory of constructivist learning. Each student that enters your classroom has a unique perspective on life that has been created by their unique experiences. This will impact their learning. If the basis of the constructivist theory states that students construct new knowledge on what they have
already had, the entry point of their learning journey is of utmost importance. Learning theories are as valuable as credentials to educators; it is important to understand what will affect the learning journey of your students. These principles outline the theory as a whole and how they affect the learning
of the students. The main points are listed below:Knowledge is constructed. Every student begins the learning journey with some preexisting knowledge and then continues to build their understanding on top of that. They will select which pieces of the experience to add, making everyones knowledge unique.Learning is a social activity. Interacting
with others is vital to constructing knowledge. Group work, discussions, conversations, and interactions are all important to creating understanding. When we reflect on our past experiences, we can see how our relationship with others is directly connected to the information learned. Learning is an active process. Students must actively engage in
discussions and activities in order to construct knowledge. It is not possible for students to take on a passive role and retain information. In order to build meaningful ideas, there must be a sensory response. Learning is contextual. Isolation is not the best way to retain information. We learn by forging connections between what we believe and the
information we have already. Learning also occurs in the situation within the context of our lives, or alongside the rest of our understanding. We reflect on our lives and classify the new information as it fits into our current perspective. People learn to learn, as they learn. As each student moves through the learning journey, they get better at selecting
and organizing information. They are able to better classify ideas and create more meaningful systems of thought. They are learning multiple ideas simultaneously, for example, if they are learning about important
dates, they are also learning how to chronologically organize important information. Learning exists in the mind. Hands-on activities and physical experience are not enough to retain knowledge. Active engagement and reflection are critical to the learning journey. In order to develop a thorough understanding, students must experience activities
mentally as well. Knowledge is personal. Because every persons perspective is unique, so will be the knowledge gained. Every individual comes into the learning activity with their own experiences and will take away different things as well. The theory of constructivist learning is based entirely around each individuals own perspective and
experiences. Motivation is key to learning. Similar to active participation, motivate their students cannot learn if they are unwilling to reflect on preexisting knowledge and activate their students to engage in the learning.
journey. See also: Eriksons Stages of Psychosocial Development Constructivism in Education It is not enough to simply know the theory of constructivist learning. Educators must also know how to implement it in their classrooms. Their goal is to create a welcoming environment that promotes active engagement in learning. In the theory of
constructivist learning, instructors act as facilitators. They must promote collaboration and adjust their lessons based on the prior level of understanding in those areas. There are four key areas that are crucial to the success of a
constructivist classroom: The instructor takes on the role of a facilitator instead of a director. There are equal authority and responsibility between the students and the instructor. There are equal authority and responsibility between the students and the instructor. There are equal authority and responsibility between the students and the instructor. There are equal authority and responsibility between the students and the instructor.
classroom to be successful. As you can see, it differs greatly from the traditional classrooms are more student-centered and the learning by implementing group activities, creating collaborative dialogue, and facilitating interactive experiences. Students
build on their prior knowledge and construct new understanding based on the lessons taught. Dialogue and negotiation are also key components to successful learning. In the table below, you can see how the constructivist
ClassroomTraditional ClassroomPursues student interests and questionsFollows a strict curriculumUses manipulative and primary materialsTextbooks are primary materialsTextbooks are primary materialsTextbooks and workbooks are primary materialsTextbooks.
is responsible for guided and interacting with students; negotiator roleInstructors assist students receive knowledge on prior understanding through interactionsStudents
acquire knowledge through repetitive practiceKnowledge is continuously evolving with student understandingKnowledge is acquired, then remains stagnantProcess is important, therefore evaluations may include observation, discussion, and student workTests and evaluations demonstrate student understandingLearning activities occur mostly in
groupsLearning activities are mostly independentWhen implementing the constructed on preexisting knowledge, the instructor must first activate prior knowledge. As new understanding is constructed on preexisting knowledge, the instructor must first activate prior knowledge. This can be done with collaborative activities,
relaxed discussions, or pre-tests. Creating cognitive dissonance. Knowledge is built when new ideas are presented and activities are just challenging enough for students. Just right problems force students to reevaluate the schemas in their mind and organize new solutions. Applying knowledge with feedback. The instructors role is to encourage
students and provide feedback. This may be seen in the form of quizzes, presentations, or discussions in the classroom. The goal of applying feedback should be to encourage even more growth and challenge knowledge of the new situation. Reflecting on learning. Students should be offered the opportunity to reflect on their understanding and
demonstrate their learning. This could be in the form of an essay, a presentation, or even the responsibility of sharing their knowledge with another students work together and teach one another. Inquiry-based learning: students create their own
questions and seek to solve them through research and observations. After underlining the arguments for their response, they make connections between their response, they make connections between their prior knowledge and the information discovered through their research. Students conclude by identifying possible gaps and developing further questions for the next project. Problem-based
learning: similar to inquiry-based learning, except focuses on problems in the real world. Students work in groups to research possible solutions as a team help students develop communication and collaborative skills while solving real-world
issues. Cooperative learning: small group activity with one key difference interdependence. While most constructivist activities rely on group learning; instead, group members rely on the knowledge of
the University of Illinois and a master's degree from Purdue University. Navigate the complexities of managing disrespectful reserved students with our step-by-step guide, and discover what they are and howRead moreIncorporating Piagets theory in
education can transform teaching methods, but how exactly can it enhanceRead moreYou will discover how Piagets Cognitive Development Theory can revolutionize classroom strategies can enhance learning outcomes byRead moreAs
cultures intertwine with education, the impact on learning styles and student engagement becomes profoundwhatRead moreConstructivism is both a learning theory and a philosophy of education should focus on problem-
solving and critical thinking, encouraging learners to connect new information with prior knowledge. It emphasizes student-centered learning, where teachers guide rather than direct, fostering deep understanding and application. Active Knowledge by
relating new ideas to prior experiences and frameworks. Meaning Making: Knowledge is not simply transmitted; it is interpreted and understood in the context of each learners existing worldview. Learner-Centered Approach: The learners perspective, interests, and cultural background play a significant role in shaping the learning process. Rather
than passively receiving information, learners reflect on their experiences, create mental representations, and incorporate new knowledge into their schemas. This promotes deeper learning, stressing that education should be grounded in real-life
activities and problem-solving. Maria Montessori (1870-1952): Developed a child-centered approach emphasizing self-directed, hands-on learning within a thoughtfully prepared environment. She believed that children build independence and deeper insight through exploration and purposeful activities. Jean Piaget (1896-1980): Focused on the stages
of cognitive development and how children actively build their knowledge through interaction with the environment. Lev Vygotsky (1896-1934): Emphasized the social context of learning; introduced the idea of the Zone of Proximal Development (ZPD) and the critical role of social interaction and scaffolding. Jerome Bruner (1915-2016): Emphasized
discovery learning where learners actively build new ideas upon existing knowledge. He also developed the spiral curriculum concept, which involves revisiting topics at increasing levels of complexity to build deeper understanding. 5 Tips for Teachers: Begin with Real-World Questions: Launch each lesson by posing relevant, open-ended questions or
scenarios. This sparks curiosity and sets a clear purpose for exploration and discovery. Asking Why? or How can we test that? prompts learners to articulate their thought processes, clarify misconceptions, and refine their ideas in response to peer or teacher feedback. Activate Prior Knowledge: One effective way to begin is by creating structured
opportunities for students to brainstorm or reflect on what I Want to Know, What I Learned) before starting a new unit. Alternatively, have small groups discuss or write down related experiences or keywords they associate with the subject
matter.Interactive, Exploratory Environments: Classrooms should invite hands-on activities, discussion, and inquiry, allowing learners to test ideas and refine their understanding. Provide Strategic Scaffolding: Offer guidance and support, through hints, examples, or feedback, without completely directing the experience. Gradually reduce help as
students gain confidence. Assessment Focused on Understanding: Measures of success should emphasize deep comprehension, application, and critical thinking rather than memorized facts. New information is interpreted through existing mental frameworks rather than simply absorbed. This idea lies at the heart of constructivism, which asserts that
learners actively build new understanding on what they already know (Phillips, 1995). In other words, the knowledge and experiences students bring into the classroom influence how they process and adopt new concepts. Jerome Bruners concept of the spiral curriculum further emphasizes this point by suggesting that key topics and ideas be revisited
multiple times at increasingly complex levels (Bruner, 1960). Each return to a concept allows learners to build on previously established knowledge, deepen their understanding, and refine any misconceptions. By consistently spiraling back to foundational topics, educators ensure that prior knowledge remains a living, evolving base for future
learning. Constructivism holds that learning demands active engagement rather than passive reception of facts. Learners must interact with and question ideas, not merely hear them. The passive view of teaching views the learner as an empty vessel to be filled with knowledge, whereas constructivism states that learners construct meaning only
through active engagement with the world. Information may be passively received, but understanding must come from making meaningful connections between prior knowledge, and the processes involved in learning. John Dewey believed students need to confront real-life problems and reflect on the
consequences in a deep, emotional way. Without this active experience, learners may only adopt superficial habits and miss genuine conceptual change. Constructivism also highlights the social aspect of knowledge construction (Dewey, 1938). Learning is both an individual and a collaborative endeavor. Dialogue and collaboration help refine thinking
By sharing ideas, learners can challenge each others assumptions and collectively build deeper understanding. Thus, all teaching and learning is a matter of sharing and negotiating socially constituted knowledge. For example, Vygotsky (1978) states cognitive development stems from social interactions from guided learning within the zone of proximal
development as children and their partners co-construct knowledge is shaped socially, each learners unique perspective matters. Cultural background and personal experiences inevitably color how individuals interpret the same lesson or activity. For Vygotsky, the environment in which children grow up will influence how they
think and what they think about. This means that same lesson, teaching or activity may result in different learning by each pupil, as their subjective interpretations differ. This principle appears to contradict the view the knowledge is socially constructed. Fox (2001, p. 30) argues: Although individuals have their own personal history of learning,
nevertheless they can share in common knowledge, and Although education is a social process powerfully influenced by cultures are made up of sub-cultures are made up of s
not a rigid copy of some socially constructed template. In learning a culture, each child changes that culture. Ultimately, constructivism asserts that knowledge resides in the learners mental models and need not perfectly mirror an external reality (Driscoll, 2000). People continuously update their personal map of the world, interpreting each new
experience in light of what they already believe and know. With every meaningful interaction, learners refine or reorganize these mental models, actively constructivism, based on the work of Jean Piaget,
social constructivism, based on the work of Lev Vygotsky; andradical constructivism. According to the GSI Teaching and Resource Center (2015, p.5): Cognitive constructivism states knowledge is something that is actively constructed by learners based on their existing cognitive structures. Therefore, learning is relative to their stage of cognitive
development. Cognitivist teaching methods aim to assist students in assimilating new information to existing knowledge, and enabling them to make the appropriate modifications to their existing intellectual framework to accommodate that information. According to social constructivism, learning is a collaborative process, and knowledge develops
from individuals interactions with their culture and society. Social constructivism was developed by Lev Vygotsky (1978, p. 57), who suggested that: Every function in the childs culture and society. Social constructivism was developed by Lev Vygotsky (1978, p. 57), who suggested that: Every function in the childs culture and society. Social constructivism was developed by Lev Vygotsky (1978, p. 57), who suggested that: Every function in the childs culture and society. Social constructivism was developed by Lev Vygotsky (1978, p. 57), who suggested that: Every function in the childs culture and society. Social constructivism was developed by Lev Vygotsky (1978, p. 57), who suggested that: Every function in the childs culture and society. Social constructivism was developed by Lev Vygotsky (1978, p. 57), who suggested that: Every function in the childs culture and society. Social constructivism was developed by Lev Vygotsky (1978, p. 57), who suggested that: Every function in the childs culture and society. Social constructivism was developed by Lev Vygotsky (1978, p. 57), who suggested that: Every function in the childs culture and society. Social constructivism was developed by Lev Vygotsky (1978, p. 57), who suggested that: Every function in the childs culture and society (1978, p. 57), who suggested that the childs culture and society (1978, p. 57).
(intrapsychological). The notion of radical constructivism was developed by Ernst von Glasersfeld (1974) and states that all knowledge on the foundations of their existing knowledge. However, radical constructivism states that the knowledge individuals create tells
us nothing about reality, and only helps us to function in your environment. Thus, knowledge can only be understood through the individuals subjective interpretation of their experiences. This theory asserts that
individuals create their own understanding of reality, and that their knowledge is always incomplete and subjective. The humanly constructed reality is all the time being modified and interactions and collaboration
 with others. Knowledge is constructed through mental processes such as attention, perception, and memory. Knowledge is constructed by the individual through their subjective experiences and learning is a social process. The learner is an active
problem-solver who constructs knowledge and meaning, and their reality is subjective and constructor of knowledge and meaning, and their reality is subjective and constructs knowledge and meaning, and their reality is subjective and constructs knowledge and meaning, and their reality is subjective and constructs knowledge and meaning, and their reality is subjective and constructs knowledge and meaning, and their reality is subjective and constructs knowledge and meaning, and their reality is subjective and constructs knowledge and meaning, and their reality is subjective and constructs knowledge and meaning, and their reality is subjective and constructs knowledge and meaning, and their reality is subjective and constructs knowledge and meaning, and their reality is subjective and constructs knowledge and meaning, and their reality is subjective and constructs knowledge and meaning, and their reality is subjective and constructs knowledge and meaning and their reality is subjective and constructs knowledge and meaning and their reality is subjective and constructs knowledge and meaning and their reality is subjective and constructs knowledge and meaning and their reality is subjective and constructs knowledge and meaning and their reality is subjective and constructs knowledge and meaning and their reality is subjective and constructs knowledge and meaning and their reality is subjective and constructs knowledge and meaning and their reality is subjective and constructs knowledge and meaning and their reality is subjective and constructs knowledge and meaning and constructs knowledge a
to construct their own understanding. The teacher encourages the learner to question and reflect on their experiences to construct their own knowledge. Learning is a social process that involves mental processes such as attention, perception, and memory.
Learning is an individual and subjective process that involves constructing meaning from ones experiences. Reality is socially constructed and subjective, and there is no one objective truth. Reality is subjective and constantly evolving
and there is no one objective truth. For example: Collaborative group work in a classroom setting. For example: Construct meaning and understanding. Constructivism is a way of teaching where instead of just telling students what to believe, teachers
encourage them to think for themselves. This educational approach emphasizes active learning and student-centered exploration. Constructivism does not equate to students learning and student-centered exploration, it also recognizes the critical role of
structured support. Far from advocating for complete independence, constructivism encourages teachers to guide learners inquiry in a way that respects their prior knowledge while leading them toward deeper understanding and mastery. The primary responsibility of the teacher is to create a collaborative problem-solving environment where
students become active participants in their own learning. From this perspective, a teacher acts as a facilitator of learning rather than an instructor. This means that teachers need to believe that students preexisting conceptions, and
guides the activity to address them and then build on them (Oliver, 2000). Teachers use scaffolding, providing guidance, feedback, and gradually released responsibility, to ensure that learners neither feel overwhelmed nor forced to reinvent the wheel. Scaffolding is a key feature of effective teaching, where the adult continually adjusts the level of
his or her help in response to the learners level of performance. In the classroom, scaffolding can include modeling a skill, providing hints or cues, and adapting material or activity (Copple & Bredekamp, 2009). A constructivist classroom emphasizes active learning, collaboration, viewing a concept or problem from multiple perspectives, reflection
student-centeredness, and authentic assessment to promote meaningful learning and help students constructivist learning environments, which must be considered when implementing constructivist teaching strategies: 1) Knowledge will be
shared between teachers and students. 2) Teachers and students will share authority. 3) The teachers role is one of a facilitator or guide. 4) Learning groups will consist of small numbers of heterogeneous students will share authority. 3) The teachers and students will share authority. 3) The teachers role is one of a facilitator or guide. 4) Learning groups will consist of small numbers of heterogeneous students.
interests is valued. Learning is based on repetition. Learning is interactive, building on what the students; students are recipients of knowledge (passive learning). Teachers have a dialogue with students, helping students construct their own knowledge
(active learning). Teachers role is directive, rooted in authority. Teachers role is interactive, rooted in negotiation. Students work primarily alone (competitive). Students work primarily in groups (cooperative) and learn from each other. While constructivism emphasizes active engagement and learner-centered exploration, these core principles truly
come alive when teachers use innovative, subject-specific strategies. One effective technique involves role-playing activities. For instance, letting students step into the shoes of historical figures during a social studies lesson. By adopting the perspectives of key personalities or everyday people from the past, learners not only deepen their factual
understanding but also practice empathy and critical thinking. In science or math classes, teachers can spark curiosity by bringing inanimate objects to life. Have students personify shapes in geometry or imagine chemical elements interacting at a party, an approach that helps them internalize abstract concepts in a fun, memorable way. Another vital
practice is asking open-ended questions that challenge students to analyze, predict, or hypothesize. Far more than simple yes/no queries, these thought-provoking prompts encourage learners to articulate their reasoning and build on one anothers ideas. Finally, ensuring real-world relevance strengthens the impact of any constructivist lesson.
Connecting classroom concepts to everyday issues or community projects turns a theoretical topic into a tangible, problem-solving experience. By combining creativity, collaboration, and authentic tasks, educators can cultivate an environment where students dont just memorize facts, they actively construct knowledge, connect it to their lives, and
develop skills that will serve them beyond the classroom. Constructivist education moves from purely traditional grading methods, like rote memorization tests, toward more authentic, reflective, and personalized measures of student growth. Rather than simply evaluating correct answers on an exam, teachers look for evidence of deeper thinking and
the connections students make between new concepts and prior knowledge. By incorporating these authentic assessment methods, teachers honor the spirit of constructivism while still maintaining accountability. Students gain a deeper sense of ownership over their learning, and educators gain richer insights into each individuals thought process,
growth, and mastery of the material. Students curate samples of their work over time, such as essays, problem solutions, sketches, or lab reports, while reflecting on how their understanding has evolved. Learning logs or journals encourage them to articulate what theyre learning, track their progress, and set personal goals. Instead of requiring a
single test at the end of a unit, performance-based assessments challenge learners to solve real-world problems or engage in hands-on projects. Presentations, simulations, or demonstrations can show how students synthesize knowledge, apply critical thinking, and collaborate with peers. Constructivist classrooms often use rubrics that emphasize
process, creativity, and depth of understanding. Teachers can create criteria for how well students research, communicate, or reflect on their findings, providing more nuanced feedback than just a letter grade. Exhibitions or showcases allow learners to present projects to classmates, parents, or community members, while peer review sessions build
evaluation skills and encourage constructive feedback. In this way, assessment becomes an ongoing dialogue rather than a one-time result. Honebein (1996) summarizes the seven pedagogical goals of constructivist learning environments: To provide experience with the knowledge construction process (students determine how they will learn). To
provide experience in and appreciation for multiple perspectives (evaluation of alternative solutions). To embed learning in realistic contexts (authentic tasks). To encourage ownership and a voice in the learning process (student-centered learning in realistic contexts (authentic tasks).
representation, (video, audio text, etc.) To encourage and accept student autonomy and initiative. (p. 103) Use raw data and primary sources, along with manipulative, interactive, and physical materials. (p. 104) When framing tasks, use cognitive terminology
such as classify, analyze, predict, and create. (p. 104) Allow students understandings of the concepts before sharing [your] own understandings of those concepts. (p. 107) Encourage students to engage in dialogue, both with the teacher and with
one another. (p. 108) Encourage student inquiry by asking thoughtful, open-ended questions and encourage students in experiences that might engender contradictions to their initial hypotheses and then encourage discussion. (p. 112)
Allow wait time after posing questions. (p. 114) Provide time for students to construct relationships and create metaphors. (p. 115) Nurture students natural curiosity through frequent use of the learning cycle model. (p. 115) Nurture students natural curiosity through frequent use of the learning cycle model. (p. 115) Nurture students natural curiosity through frequent use of the learning cycle model. (p. 116)Some theorists argue that purely discovery-based or minimally guided instruction can be ineffective, especially for novices.
Critics, including Kirschner, Sweller, and Clark (2006), maintain that when students lack strong foundational skills, giving them little support can cause cognitive overload and confusion. The rationale is that novices often need structured guidance, strategic hints, feedback, or step-by-step scaffolds, to prevent frustration and ensure consistent
progress. If educators rely solely on open-ended methods, students may become disengaged or fail to master basic skills. On the other hand, balanced approaches that blend guided instruction with opportunities for exploration can yield deeper understanding while avoiding the pitfalls of minimal guidance. This implies that teachers should adapt the
level of support based on learners skill levels, ensuring the method aligns with instructional goals and student needs. Some observers question whether constructivist teaching consistently leads to higher student achievement (Kirschner, Sweller, & Clark, 2006; Tobias & Duffy, 2009). They note that standardized tests occasionally show weaker basic
skills among students who rely heavily on discovery-based methods, an issue that surfaced prominently during the math wars, when critics argued that learners were not mastering fundamental procedures by inventing algorithms on their own. Research on this topic, however, remains mixed: while certain studies highlight gains in critical thinking
and conceptual understanding under constructivist methods, they also emphasize the importance of clear guidance and structured support (Mayer, 2004; Hmelo-Silver, Duncan, & Chinn, 2007). An overly simplistic adoption of discovery-based activities may hamper basic skills acquisition and undermine standardized test performance. However, a
nuanced, hybrid model, mixing direct instruction of fundamentals with active, student-driven tasks, often promotes both core competence and the deeper engagement championed by constructivism. This combination approach can improve learners conceptual grasp while still meeting accountability requirements. Fully open-ended lessons risk
neglecting essential knowledge and might be time-consuming, limiting content coverage. Constructivist activities often emphasize depth over breadth, which is beneficial for conceptual mastery but can clash with tight curricula or standardized testing demands. Critics note that if every topic is approached via extended inquiry, learners may not
receive enough direct practice in fundamental facts, procedures, or theories. Students could finish a unit with inconsistent mastery of key concepts, particularly if they need systematic drills (e.g., in math operations) or exposure to a broad range of topics (as in survey-style courses). To address this, teachers can embed essential knowledge goals into
project-based or inquiry-driven tasks, ensuring students cover mandated content while retaining the deeper engagement constructivism promotes. Constructivism promotes. Constructivism promotes that some students voices may dominate while others remain passive. While group tasks enable peer support and multiple
perspectives, they can also produce uneven participation: more vocal or advanced students may dominate, leading others to disengage. Misconceptions can also spread unchecked if the teacher doesnt intervene in time. Without careful planning, such as assigning defined roles or mixing independent reflection with group activities, some students may
fail to actively construct understanding. This pitfall can undermine a key benefit of collaboration: that learners build knowledge together. Teachers who monitor group dynamics and provide structivist lessons often demands time, resources,
and smaller class sizes, luxuries not all schools or teachers can afford. Hands-on projects, inquiry sessions, and group work often require smaller class sizes, teachers might find it difficult to fully adopt constructivist methods. Educators may feel forced
to revert to more teacher-centered approaches to cover content swiftly and meet external standards. As a result, some adopt a mixed instruction when necessary. This hybrid strategy helps reconcile the ideals of student-driven exploration with real-world
classroom constraints. Behaviourism Constructivism Emphasizes the role of the environment and external factors in behavior Emphasizes the role of internal mental processes in learning and knowledge is actively constructed by the individual based on their
experiences Teachers are the authority figures who impart knowledge and respond to rewards/punishments Students are active participants in constructing their own understanding and knowledge Observable
behavior and measurable outcomes Internal mental processes, thinking, and reasoning Evaluation is based on observable behavior and measurable outcomes Evaluation is based on individual understanding and internal mental processes Classical and operant conditioning, behavior modification, reinforcement Problem-based learning, inquiry-based
learning, cognitive apprenticeship Constructivism Cognitivism Emphasizes the active role of learners in constructing their own understanding Emphasizes the role of internal mental processes in learning and the acquisition of knowledge is a product of internal
mental processes and can be objectively measured and assessed Teachers are facilitators who guide learners in constructing their own understanding Students are
receivers of knowledge from teachers and use their cognitive abilities to process information from teachers and information processes and information is based on objectively measurable outcomes and mastery
of specific knowledge and skills Problem-based learning, inquiry-based learning, cognitive apprenticeship Information processing theory, schema theory, metacognition Constructivism in the philosophy of education is the belief that learners actively construct their own knowledge and understanding of the world through their experiences, interactions
and reflections. It emphasizes the importance of learner-centered approaches, hands-on activities, and collaborative learning to facilitate meaningful and authentic learning to facilitate meaningful and tangibly. The teacher
would encourage discussions among students, allowing them to share their ideas and perspectives, and guide them toward discovering the relationship between dividing by a fraction and multiplying by its reciprocal. Through guided questioning, the teacher would facilitate critical thinking and help students arrive at the understanding that dividing
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exception or limitation. No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. Constructivism in education is a learning theory states students learn new information by building on top of a
foundation of what theyve already learned. While constructivism is one of several education by relating new concepts to their life experiences to deepen their understanding and increase their comprehension of new information. This article will cover the basics of constructivism as
an educational theory and why educators may want to adopt it to reach students and enhance learning outcomes. Constructivism learning theory (CLT) operates on the principle that students actively participate in discovery-based learning theory (CLT) operates on the principle that students and enhance learning as both the act of
building and, if it were a building itself, with prior knowledge forming a foundation to build upon. Teachers and educators can leverage this approach effectively by helping students better understand concepts they have already learned, relating them to their everyday experiences to help new lessons resonate. Constructivism has its roots in the
cognitive revolution of the 1950s as an intellectual movement to study the mind and its various processes. Constructivism is a reaction to behaviorism; previously, the dominant approach solely focused on observable behavior, not the hidden thought process. Constructivism encompassed thought leaders and theorists from such varying disciplines as
psychology, anthropology, linguistics, neuroscience, computer science, and philosophy. The leading figure of cognitive constructivism, as it pertains to education, was Swiss psychologist Jean Piaget. Piaget theorized that people learn by connecting their experiences with ideas presented to them. His work focused heavily on childrens cognitive
development and how they learn, as opposed to what influences their learning. While constructivism is a learning theory, it comprises several principles that serve as pillars to support the theory. Students learn new concepts by building upon their existing knowledge. Factors such as a students prior experiences, learnings, social and cultural beliefs,
and how they process information allow them to digest information in their own manner. Based on these factors, one students insights may differ from anothers, who may have different experiences and beliefs, giving them different takeaways from a lesson. Ultimately, each student will construct their own knowledge differently, based on the
knowledge theyve gained before, building on top of it with each subsequent lesson. This principle views learning as an active process rather than a passive one. Instead of being told something and expected to absorb that information, learning as a dynamic process means that students must be engaged and actively participate in their learning. To
learn, students need to ask questions, contribute to discussions, and demonstrate that they can apply those learnings in meaningful ways to deepen their understanding. This principle circles back to social-emotional learning (SEL), which can start for students as young as PreK. SEL helps students better understand their thoughts and feelings and
develop greater self-awareness and empathy for others and those whose experiences differ from their own. As one of the principles of CLT, knowledge as a social construct involves roundtable discussions, conversations, and group activities to help students better understand not just the lessons at hand but how classmates with different experiences
view the material. In addition to the student understanding the material based on their prior knowledge, they also hear from classmates who may view the material and knowledge differently, based on personal experiences and
feelings. Each student may bring a different perspective to the same lesson. Even when various students in a classroom share their thoughts on the same material, knowledge becomes personal for each student. While discussion, group interaction, and activity-based learning are essential, constructivism posits that the most important work a student
can do to develop their knowledge is to formulate thoughts on lessons presented to them. Active engagement of the mind is essential for effective learning. When a student engages with the material mentally, it enhances their ability to retain knowledge. Students learn more if they are motivated and excited to learn. While constructivism requires
students to take an active role in their learning, teachers must find ways to help students tap into their knowledge reserves to better support the new information to resonate. Although constructivism are cognitive, social, and radical
constructivism. Cognitive constructivism operates on the perception that students actively construct knowledge based on their understanding of the world and their experiences up to that moment. Social constructivism emphasizes interactions
with others as a basis for learning. People glean knowledge from individual relationships, their culture and environment, as well as their role within larger communities. In essence, social construct their knowledge to build
upon further. Radical constructivism views knowledge as something a student creates based on their own experiences and not handed from teacher to student constructs their own knowledge based on personal perspective. As a result, radical
constructivism calls for teachers to offer students more opportunities to create their knowledge and be aware of their students different perspectives and backgrounds, which informs each students more opportunities to create their knowledge and be aware of their students different perspectives and backgrounds, which informs each students different perspectives and backgrounds.
framework to continue to build upon a students learnings. The five stages of constructivism are: inviting ideas, exploration, proposition, explanation and solution, and taking action. Inviting ideas: Sometimes known as the engagement stage, this stage involves an educator posing a question or situation for the student to consider, asking them to tap
into their own knowledge reserves. The student then begins to formulate an opinion or idea on new information presented to them. Exploration the concept presented to them. This can involve students and teachers discussing the question
or scenario posed in the engagement stage. Proposition: In the proposition stage, students discuss what theyve learned or any observations made based on their initial engagement and new ideas that cropped up during discussions. The teacher plays a supportive role, helping them articulate their thoughts if needed. However, this stage is critical to
the student demonstrating their understanding of the concept. Explanation and solution: The explanation stage is sometimes referred to as the elaboration stage. Students can talk through their thought processes and have a dialog with their teacher. In turn, the teacher can address any misconceptions or misunderstandings, tailoring the lesson in a
way that helps a student better grasp a concept based on their prior learnings. Taking action involves teachers asking students to sum up their cognitive process throughout and how their thoughts may have changed since the initial inviting ideas phase. This allows students to apply new learnings
while examining how their initial perceptions evolved throughout the five stages based on new interactions, discussions, and problem-solving. A constructivist approach in the classroom can benefit students in several ways. It fosters greater engagement among students, prompting them to ask questions and formulate their own opinions, enhancing
their critical thinking skills. By having the ability to ask questions instead of passively listening to a lecture and repeating what they memorized, the argument for a constructivist classroom also places a greater emphasis on tailoring the
curriculum to focus on students interests. Teachers formulate lessons to make them more relatable to students based on their prior knowledge and experiences. The onus is on the teacher to focus on topics of interest to students and
their teachers. Students may often work in groups, which helps them engage with new concepts and hear others thoughts, which may not necessarily be similar to their peers opinions and deepen their social skills. While constructivism has many
advantages, there are also some disadvantages to this approach. For instance, teachers may need help creating lesson plans and personalizing instruction with an eye on constructivism if they deal with larger class sizes. According to the National School Boards Association (NSBA), there is a correlation between overcrowded classrooms, reduced
attention among students, and student misbehavior. A constructivist approach may also pose a disadvantage related to standardized tests to qualify for entrance to an institution of higher learning and determine eligibility for academic scholarships
Constructivism is an action-oriented approach to learning, requiring students to build upon existing knowledge to understand better and apply new concepts. Teachers are there to shepherd students through their cognitive processing and devise classroom activities include:
Cooperative learning: Students can work in small groups or one-on-one with another student to converse about a concept presented to them. This activity differs from more traditional group work in that students work together to share their ideas and knowledge to complete a task instead of assigning specific tasks to a different group member or
placing an undue burden on one or two students in a group. Instead, students pool their knowledge and experiences to arrive at answers based on independent research and observation. They share evidence to support the theories they gleaned, then observe how their new
findings connect to their previous knowledge and how it may be similar or different. At the end of an inquiry-based learning activity, students state their conclusions and areas where they may want to delve deeper to understand a concept better. Problem-based learning: Problem-based learning differs from inquiry-based learning in that students are
presented with an actual problem that requires them to work together to arrive at a solution. This fosters students social and communication skills, requiring them to work with others instead of working independently to arrive at a solution or conclusion. Constructivism is one of many educational approaches that teachers can leverage to enhance
learning outcomes. CLT focuses on building upon a students existing knowledge base and helping them connect what they already know and new concepts. Teachers who employ constructivism in the classroom can help foster greater student engagement and create meaningful dialogues that help students better understand new ideas. If youre
considering a career in education, National Universitys Teacher Education program can help put you on the path toward a rewarding career that helps shape the minds of future generations. We offer credential and certificate programs, alongside bachelors and masters degree programs, including a Bachelor of Arts Major in Early Childhood
Education, as well as a Master of Early Childhood Education and Master of Early Childhood Education by building on top of
what they already know to deepen their understanding of new concepts and ideas. In a classroom setting, teachers allow students to take more of an active role in how they learn. Students are prompted to ask questions and engage in discussions with their teacher and peers, sharing their own perspectives based on their existing knowledge base.
Teachers help facilitate these conversations and group sessions, assisting students to articulate their observations better to help them grasp more intricate conversations and increase their understanding of a given subject. Constructivism can help students take a more active role in their learning, giving them a forum to ask questions and take part in
discussions about a subject presented to them. This is opposed to a more passive approach where students are expected to listen to a lecture and absorb information. From a teaching perspective, constructivism also requires teachers to deepen their understanding of their students, tailor lesson plans to correspond better with what their students
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already know, and make lessons more relatable and engaging. Teachers act in more of an advisory role, shepherding students through the process of articulating their thoughts, questions, and observations to help them learn. Our understanding of how people learn is ever-growing and changing. Likewise, the way that we process what we learn is an
 ongoing processa constant update to our view of the world. Few learning theories better embody this concept than constructivism. One of the most influential learning theories today, it has been used in classrooms and other learning environments around the world for decades, and it continues to be a powerful tool for teachers and learners alike.
Constructivism in education is an approach that focuses on allowing students to construct their own understanding of a subject by actively engaging with the material presented to them. This theory emphasizes learner-centric approaches where the student takes ownership of their knowledge and experiences as they progress through a course or
program. It encourages exploration, experimentation, collaboration, experimentation, collaboration, experimentation, collaboration, experimentation, collaboration systems today. This article will leave you with a better understanding of constructivism as well as a handful of methods you can use to implement this learning theory in your learning management system.
The constructivist learning theory refers to the method of learning that allows learners to construct their knowledge and skills through meaningful interactions and empowers them through their own understanding through experience
and reflection. Rather than memorizing facts from a teacher or external source, learners actively constructivism is discoverya crucial aspect of the learning process. Learners take new information and internalize it, integrating it with their prior knowledge and experiences. The constructivist theory of
learning emphasizes the importance of social interaction in the learning process, as learners absorb information in two ways: Assimilation: Learners adjust their existing understanding to incorporate new knowledge or experiences.
These two methods of learning are used either interchangeably or simultaneously by all learning theory revolve around facilitating meaningful learning. They are: 1. Learners construct meaning. Learning is an active process where students build upon
their existing knowledge to make sense of new information. Through constructivism, learners formulate and modify their opinions regularly. 2. Learning is inherently social. Social interaction plays an essential role in helping learners understand, evaluate, and internalize ideas and concepts. Learners are far more likely to encounter new information
when they interact with others and their environment. 3. Knowledge is situated. Meaningful learning takes place when knowledge can be applied to real-world or relevant contexts. You dont just learn for the sake of learningyour education is meant to assist you. 4. Reflection plays a key role. Constructivism also stresses the importance of reflecting on
ones learning process and understanding. Through reflection, learners can assess their current level of knowledge and identify areas where they need to improve or gain further insight. 5. Mistakes are part of the process. Making mistakes is an important aspect of learning, as it allows for opportunities for growth and development. Experimentation
with different strategies often leads to successful outcomes later on down the line. These aspects make up a learning theory that leaves learners with their own evolving paradigm with which to process future information. There are three main types of constructivism that have been identified, each having a significant (and slightly altered) impact on
the way learners interact with their environment. This type of constructivism emphasizes the importance of social interaction in learning. It suggests that learners understand and internalize new concepts and ideas through collaboration, dialogue, and discourse with other people. This type of constructivism focuses on the individual learners ability to
form meaning from their experiences. It views learning as an active process where knowledge is constructivism should not be confused with cognitivismanother important learning
theory. While similar, the difference in cognitivism vs constructivism has to do with the theorys approach. Cognitivism explains the internal, psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal, psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal, psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal, psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal, psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal, psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal, psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal, psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal, psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal psychological processes that occur when information is absorbed. By contrast, constructivism explains the internal psychological psychological psychological psychological
knowledge is subjective and personal. Knowledge cannot be shared or transferred between individuals because their unique perspective will cause them to interpret information differently. Constructivist learning theory has been used in a variety of educational settings, such as classrooms, museums, libraries, and online environments. However, it
can also be used to improve employee training programs in a number of ways. Here are some constructivism examples being used in the workplace: 1. Break down traditional learning models. Traditional learning models rely heavily on lectures and memorization. However, constructivism encourages experiential learning models.
to actively engage with the material presented to them. Provide feedback. Constructivism emphasizes the importance of reflection and feedback. Make sure to create a learning environment where learners feel comfortable
better comprehend the material. 4. Facilitate meaningful conversations. Constructivism is all about making meaningful connections between ideas. Encourage conversations between ideas. Encourage conversations between ideas.
mistakes are part of the learning process. Dont be afraid to try new approaches in order to create the most effective learning environment for your employees. While constructivism has its merits, it is not without its criticisms. One major criticism of this learning theory is that it can be difficult to assess learner comprehension since there arent
inherently right or wrong answers in a constructivist approach. Incorporating incorrect information into your understanding of a topic is more than a puzzle missing a pieceyoure more likely to miss future pieces, too. Additionally, constructivism is often a self-directed method of learning but demands a great deal from mentors. Constructivism
requires educators to remain attentive and provide learners with guidance complementary to their individual needs. However, this can be especially difficult (and time-consuming) if there are multiple learners involved. Some have also argued that constructivism does not take into account cultural or social differences between learners, and it can
often be biased towards one group or another. The theory doesnt offer an efficient way of teaching large groups at once, which increases the likelihood of unequal outcomes. Constructivism is an essential component of modern training, providing a framework within which learners can explore new concepts in a meaningful way. Through exploration,
experimentation, problem-solving and collaboration, learners are able to construct their own understanding of a subject, and find solutions that is ever-evolving as our understanding of learning grows. By understanding how
this learning theory works and how it can be applied effectively in your organizations training program, you can create an environment that fosters growth and development among your employees. Constructivism, as a theory of learning, posits that learners actively construct their own knowledge rather than passively absorbing information. While
various educators and psychologists have shaped this approach, the contributions of key theorists like John Dewey, Jean Piaget, Lev Vygotsky, Jerome Bruner, and David Novak stand out as some of the most influential. In this blog post, well take a deeper dive into their theories and explore how each has impacted our understanding of how learners
build knowledge. Table of Contents Before diving into the theories of individual thinkers, its important to grasp the core idea of constructivism. At its heart, constructivism challenges the traditional notion of teaching as merely transferring information from teacher to student. Instead, it emphasizes that learning is an active, dynamic process where
individuals build new knowledge upon the foundation of their previous experiences. Constructivism is centered around the belief that learners make sense of the world through active engagement, social interaction, and hands-on experiences. Instead of passively receiving knowledge, learners become the architects of their understanding, engaging in
problem-solving, critical thinking, and self-reflection to construct meaning from their experiences. Constructivism has evolved into a cornerstone of modern educational theory, influencing how teachers approach instruction and how students engage with learning material. John Dewey: Learning Through Experience John Dewey is often regarded as
the father of modern education, and his ideas laid the groundwork for much of constructivist thought. Dewey believed that education should not be a rigid, one-way transfer of knowledge but an interactive process. His perspective was that learning is most effective when it is tied to real-world experiences. According to Dewey, education should not
merely prepare children for life but actively help them live it. He introduced the concept of learning by doing, emphasizing the importance of experiential learning. Deweys idea was that students learn best when they engage in meaningful, practical activities that connect with their own experiences and interests. This hands-on approach allows
learners to actively explore concepts, make connections, and reflect on their findings, rather than memorizing facts out of context. For Dewey, the classroom should function as a dynamic environment where students can interact with each other, explore various viewpoints, and engage in projects that allow them to solve real-life problems. He stressed
that learning should be relevant and rooted in the students own life and society. Key takeaway: Deweys theory focuses on the importance of real-world experiences, critical thinking, and reflection as the basis for constructing knowledge. Education, according to Dewey, should be a social and participatory process that encourages active engagement
with the world. Jean Piaget: Stages of Cognitive Development Jean Piagets contributions to constructivism are rooted in his understanding of cognitive development, each of which represents a different way of thinking about the world. He believed that children are not
passive recipients of information, but instead, they actively construct knowledge by interacting with their environment. Piaget outlined four stages of cognitive development stages of cognitive development. Sensor motor actions. Preoperational stages of cognitive development stages of cognitive development.
 words and images) to represent objects, but their thinking is still egocentric and lacks logical reasoning. Concrete operational stage (7 to 11 years) Children develop the ability to think logically about concrete events and understand concepts like conservation and reversibility. Formal operational stage (12 years and older) Abstract thinking develops,
allowing individuals to solve hypothetical and complex problems. Piagets theory underscores the idea that learning is a progressive process that occurs as individuals actively engage with their environment and assimilate new information. He also emphasized that learning is a progressive process that occurs as individuals actively engage with their environment and assimilate new information.
models evolve as they encounter new information. Cognitive development, for Piaget, was not simply about acquiring knowledgeit was about the continuous reorganization and adaptation of mental structures. Key takeaway: Piagets stages of cognitive development highlight that learners construct their understanding of the world progressively
through stages, and that intellectual growth occurs through interaction with the environment and active problem-solving. Lev Vygotsky: Social Interaction and Cultural Context While Piaget focused on the individuals cognitive development, Lev Vygotsky placed a stronger emphasis on the role of social interaction in learning. Vygotsky argued that
cognitive development is largely a social process, and that learning occurs most effectively when it is guided by others. His concept of the Zone of Proximal Development (ZPD) became central to understanding how children learn in social contexts. The ZPD is the gap between what a learner can do independently and what they can achieve with the
help of more knowledgeable others, such as teachers, peers, or adults. Vygotsky believed that learners can be guided through tasks that are just beyond their current abilities, helping them to reach higher levels of understanding. This process, called scaffolding, involves providing temporary support to learners until they can perform the task on their
own. Vygotsky also argued that learning is influenced by cultural and societal factors. He believed that language to communicate with others is a powerful tool for cognitive development. For Vygotsky, learning occurs not only through direct experience but also through participation
in cultural practices and social interactions that provide context, and the guidance of more knowledgeable others in the learning process. He introduced the idea that learners can achieve more with support, challenging the notion of
solitary, individual learning. Jerome Bruner: Constructing Knowledge through Discovery Jerome Bruner built on the work of both Piaget and Vygotsky, focusing on how learners construct knowledge through exploration and
problem-solving. He argued that learning should be a process of discovery, where students are encouraged to find answers for themselves rather than simply receiving information from a teacher. One of Bruners key contributions was the idea of discovery learning. He believed that students should be given opportunities to explore and experiment in
order to construct their own understanding. In this approach, teachers act as facilitators, guiding students to ask questions and explore solutions independently, rather than simply providing the answers. Bruner also emphasized that learners should be exposed to the full range of knowledge and skills as early as possible, even if they may not fully
understand them at first. This concept, known as the spiral curriculum, suggests that students can revisit concepts at different stages of their development, gradually deepening their understanding over time. Key takeaway: Bruners theory of discovery learning highlights the importance of exploration, problem-solving, and self-directed learning. He importance of exploration, problem-solving, and self-directed learning.
emphasizes that learners build knowledge best when they actively engage with the material and are guided to discover new ideas on their own. David Novak is best known for his work on concept maps, a tool used to visually represent relationships between ideas and concepts. His theory of learning
emphasizes the integration of thinking, feeling, and acting, creating a more holistic approach to constructivism. Novaks humanistic constructivism places importance on the emotional and social aspects of learning, recognizing that learners dont just
construct knowledge in an abstract sensethey also bring their personal experiences, emotions, and values into the learning process. By integrating cognitive, emotional, and social dimensions, Novaks approach promotes a more comprehensive and human-centered form of learning. Concept mapping, which is central to his theory, allows learners to
visually organize and structure knowledge in ways that are meaningful to them, reflecting their understanding, emotions, and prior experiences. Key takeaway: Novaks humanistic constructivism emphasizes the importance of emotions, and prior experiences. Key takeaway: Novaks humanistic constructivism emphasizes the importance of emotions, and prior experiences. Key takeaway: Novaks humanistic constructivism emphasizes the importance of emotions, and prior experiences. Key takeaway: Novaks humanistic constructivism emphasizes the importance of emotions, and prior experiences.
just through cognitive processes but also by connecting emotionally and socially with the material. Conclusion: The Evolution of Constructivist Theories The contributions of Dewey, Piaget, Vygotsky, Bruner, and Novak have greatly influenced how we understand the process of learning. While each theorist brought a unique perspective, their collective
work underscores a common thread: learning is an active, dynamic, and social process. Whether through Deweys real-world experiences, Piagets cognitive stages, Vygotskys social context, Bruners discovery learning, or Novaks humanistic approach, these theorists have shaped modern education in profound ways. In todays classrooms, constructivist
principles are widely applied to encourage active learning, critical thinking, and social collaboration. Understanding these theories helps educators create environments where learners can build knowledge through real-world experiences, social interaction, and meaningful engagement. With these foundational ideas, we can continue to shape
education in ways that allow students to become active, lifelong learners. What do you think? How do you see constructivism influencing modern education? Which theorists ideas do you find most applicable to your learning or teaching experiences? Constructivism is both a learning theory and a philosophy of education that suggests learners actively
build their knowledge through experiences and interactions. According to this theory, education should focus on problem-solving and critical thinking, encouraging learners to connect new information with prior knowledge. It emphasizes student-centered learning, where teachers guide rather than direct, fostering deep understanding and
application. Active Knowledge Construction: Learners arent passive recipients of information; instead, they construct knowledge by relating new ideas to prior experiences and frameworks. Meaning Making: Knowledge is not simply transmitted; it is interpreted and understood in the context of each learners existing worldview. Learner-Centered
Approach: The learners perspective, interests, and cultural background play a significant role in shaping the learning process. Rather than passively receiving information, learners reflect on their experiences, create mental representations, and incorporate new knowledge into their schemas. This promotes deeper learning and
understanding.Influential Theorists: John Dewey (1859-1952): Advocated for experiential learning, stressing that education should be grounded in real-life activities and problem-solving. Maria Montessori (1870-1952): Developed a child-centered approach emphasizing self-directed, hands-on learning within a thoughtfully prepared environment. She
believed that children build independence and deeper insight through exploration and purposeful activities. Jean Piaget (1896-1980): Focused on the stages of cognitive development and how children actively build their knowledge through interaction with the environment. Lev Vygotsky (1896-1934): Emphasized the social context of learning;
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reality, and that knowledge can only be understood through the individuals subjective interpretation of their experiences. This theory asserts that individuals create their own understanding of reality, and that their knowledge is always incomplete and subjective. The humanly constructed reality is all the time being modified and interacting to fit
ontological reality, although it can never give a true picture of it. (Ernest, 1994, p. 8) Knowledge is constructed through mental processes such as attention, perception, and memory. Knowledge is constructed by the individual through their subjective experiences and
teacher facilitates learning by providing opportunities for social interaction and collaboration. The teacher provides information and reflect on their experiences to construct their own knowledge. Learning is a social process that
involves collaboration, negotiation, and reflection. Learning is an individual process that involves mental process that involves constructing meaning from ones experiences. Reality is socially constructed and subjective, and there is no one objective truth
personal experiences to construct meaning and understanding. Constructivism is a way of teaching where instead of just telling students what to believe, teachers encourage them to think for themselves. This educational approach emphasizes active learning and student-centered exploration. Constructivism does not equate to students learning
entirely on their own with no guidance. While constructivist theory emphasizes active learning and student-centered exploration, it also recognizes the critical role of structured support. Far from advocating for complete independence, constructivism encourages teachers to guide learners inquiry in a way that respects their prior knowledge while constructivism encourages teachers to guide learners inquiry in a way that respects their prior knowledge while constructivism encourages teachers to guide learners inquiry in a way that respects their prior knowledge while constructivism encourages teachers to guide learners inquiry in a way that respects their prior knowledge while constructivism encourages teachers to guide learners inquiry in a way that respects their prior knowledge while constructivism encourages teachers to guide learners inquiry in a way that respects their prior knowledge while constructivism encourages teachers to guide learners inquiry in a way that respects their prior knowledge while constructivism encourages teachers to guide learners inquiry in a way that respects their prior knowledge while constructivism encourages teachers to guide learners inquiry in a way that respects their prior knowledge while constructivism encourages the constructivism encoura
leading them toward deeper understanding and mastery. The primary responsibility of the teacher is to create a collaborative problem-solving environment where students become active participants in their own learning. From this perspective, a teacher active problem-solving environment where students become active participants in their own learning. From this perspective, a teacher acts as a facilitator of learning rather than an instructor. This means that teachers need to
believe that students are capable of thinking and coming up with their own ideas. The teacher makes sure he/she understands the students preexisting conceptions, and guides the activity to address them and then build on them (Oliver, 2000). Teachers use scaffolding, providing guidance, feedback, and gradually released responsibility, to ensure
that learners neither feel overwhelmed nor forced to reinvent the wheel. Scaffolding is a key feature of effective teaching, where the adult continually adjusts the level of his or her help in response to the learners level of performance. In the classroom, scaffolding can include modeling a skill, providing hints or cues, and adapting material or activity
basic characteristics of constructivist learning environments, which must be considered when implementing constructivist teaching strategies: 1) Knowledge will be shared between teachers and students. 2) Teachers and students will share authority. 3) The teachers and students will share authority. 3) The teachers and students will be shared between teachers and students.
of heterogeneous students. Traditional ClassroomConstructivist ClassroomConstructivist ClassroomStrict adherence to a fixed curriculum is highly valued. Pursuit of student already knows. Teacher-centered. Student-centered. Teachers disseminate information
to students; students are recipients of knowledge (passive learning). Teachers role is directive, rooted in authority. Teachers role is interactive, rooted in negotiation. Students work primarily alone (competitive). Students work primarily in groups
(cooperative) and learn from each other. While constructivism emphasizes active engagement and learner-centered exploration, these core principles truly come alive when teachers use innovative, subject-specific strategies. One effective technique involves role-playing activities. For instance, letting students step into the shoes of historical figures
during a social studies lesson. By adopting the perspectives of key personalities or everyday people from the past, learners not only deepen their factual understanding but also practice empathy and critical thinking. In science or math classes, teachers can spark curiosity by bringing inanimate objects to life. Have students personify shapes in
geometry or imagine chemical elements interacting at a party, an approach that helps them internalize abstract concepts in a fun, memorable way. Another vital practice is asking open-ended questions that helps them internalize abstract concepts in a fun, memorable way. Another vital practice is asking open-ended questions that helps them internalize abstract concepts in a fun, memorable way.
 learners to articulate their reasoning and build on one anothers ideas. Finally, ensuring real-world relevance strengthens the impact of any constructivist lesson. Connecting experience. By combining creativity, collaboration, and
reflective, and personalized measures of student growth. Rather than simply evaluating correct answers on an exam, teachers look for evidence of deeper thinking and the connections students make between new concepts and prior knowledge. By incorporating these authentic assessment methods, teachers honor the spirit of constructivism while
still maintaining accountability. Students gain a deeper sense of ownership over their learning, and educators gain richer insights into each individuals thought process, growth, and mastery of the material. Students curate samples of their work over time, such as essays, problem solutions, sketches, or lab reports, while reflecting on how their
understanding has evolved. Learning logs or journals encourage them to articulate what theyre learning, track their progress, and set personal goals. Instead of requiring a single test at the end of a unit, performance-based assessments challenge learners to solve real-world problems or engage in hands-on projects. Presentations, simulations, or
demonstrations can show how students synthesize knowledge, apply critical thinking, and collaborate with peers. Constructivist classrooms often use rubrics that emphasize process, creativity, and depth of understanding. Teachers can create criteria for how well students research, communicate, or reflect on their findings, providing more nuanced
feedback than just a letter grade. Exhibitions or showcases allow learners to present projects to classmates, parents, or community members, while peer review sessions build evaluation skills and encourage constructive feedback. In this way, assessment becomes an ongoing dialogue rather than a one-time result. Honebein (1996) summarizes the
ownership and a voice in the learning process (student-centered learning). To embed learning in social experience (collaboration). To encourage and accept student autonomy and accept student accept student autonomy and accept student autonomy and accept student autonomy and accept student autonomy and accept student accept student autonomy and accept student autonomy and accept student accept st
initiative. (p. 103) Use raw data and primary sources, along with manipulative, interactive, and physical materials. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 105) Inquire about students
understandings of the concepts before sharing [your] own understandings of those concepts. (p. 107) Encourage students to engage in dialogue, both with the teacher and with one another. (p. 108) Encourage student inquiry by asking thoughtful, open-ended questions and encouraging students to ask questions of each other. (p. 110) Seek
elaboration of students initial responses. (p. 111) Engage students in experiences that might engender contradictions to their initial hypotheses and then encourage discussion. (p. 112) Allow wait time after posing questions. (p. 114) Provide time for students in experiences that might engender contradictions to their initial hypotheses and then encourage discussion. (p. 112) Allow wait time after posing questions.
through frequent use of the learning cycle model. (p. 116)Some theorists argue that purely discovery-based or minimally guided instruction can be ineffective, especially for novices. Critics, including Kirschner, Sweller, and Clark (2006), maintain that when students lack strong foundational skills, giving them little support can cause cognitive
overload and confusion. The rationale is that novices often need structured guidance, strategic hints, feedback, or step-by-step scaffolds, to prevent frustration and ensure consistent progress. If educators rely solely on open-ended methods, students may become disengaged or fail to master basic skills. On the other hand, balanced approaches that
blend guided instruction with opportunities for exploration can yield deeper understanding while avoiding the pitfalls of minimal guidance. This implies that teachers should adapt the level of support based on learners skill levels, ensuring the method aligns with instructional goals and student needs. Some observers question whether constructivist
teaching consistently leads to higher student achievement (Kirschner, Sweller, & Clark, 2006; Tobias & Duffy, 2009). They note that standardized tests occasionally show weaker basic skills among students who rely heavily on discovery-based methods, an issue that surfaced prominently during the math wars, when critics argued that learners were
not mastering fundamental procedures by inventing algorithms on their own. Research on this topic, however, remains mixed: while certain studies highlight gains in critical thinking and conceptual understanding under constructivist methods, they also emphasize the importance of clear guidance and structured support (Mayer, 2004; Hmelo-Silver, 2004).
Duncan, & Chinn, 2007). An overly simplistic adoption of discovery-based activities may hamper basic skills acquisition and undermine standardized test performance. However, a nuanced, hybrid model, mixing direct instruction of fundamentals with active, student-driven tasks, often promotes both core competence and the deeper engagement
championed by constructivism. This combination approach can improve learners conceptual grasp while still meeting accountability requirements. Fully open-ended lessons risk neglecting essential knowledge and might be time-consuming, limiting content coverage. Constructivist activities often emphasize depth over breadth, which is beneficial for
conceptual mastery but can clash with tight curricula or standardized testing demands. Critics note that if every topic is approached via extended inquiry, learners may not receive enough direct practice in fundamental facts, procedures, or theories. Students could finish a unit with inconsistent mastery of key concepts, particularly if they need
systematic drills (e.g., in math operations) or exposure to a broad range of topics (as in survey-style courses). To address this, teachers can embed essential knowledge goals into project-based or inquiry-driven tasks, ensuring students cover mandated content while retaining the deeper engagement constructivism promotes. Constructivist classrooms
often rely on collaborative learning, raising worries that some students voices may dominate while others remain passive. While group tasks enable peer support and multiple perspectives, they can also produce uneven participation: more vocal or advanced students may dominate, leading others to disengage. Misconceptions can also spread
unchecked if the teacher doesnt intervene in time. Without careful planning, such as assigning defined roles or mixing independent reflection with group activities, some students may fail to actively construct understanding. This pitfall can undermine a key benefit of collaboration: that learners build knowledge together. Teachers who monitor group activities, some students may fail to actively construct understanding.
dynamics and provide structured tasks help ensure equity, allowing all learners to contribute meaningfully. Implementing robust constructivist lessons often demands time, resources, and group work often require smaller class sizes, greater
prep time, and specialized materials. Under high-stakes testing pressures or large classes, teachers might find it difficult to fully adopt constructivist methods. Educators may feel forced to revert to more teacher-centered approaches to cover content swiftly and meet external standards. As a result, some adopt a mixed instructional model, infusing
constructivist activities where feasible while maintaining direct instruction when necessary. This hybrid strategy helps reconcile the ideals of student-driven exploration with real-world classroom constructivism Emphasizes the role of internal mental
processes in learning and knowledge is gained through external stimuli and observable behaviors Knowledge is actively constructed by the individual based on their experiences Teachers are facilitators who guide students in constructing their own knowledge is actively constructed by the individual based on their experiences.
Students are passive receivers of knowledge and respond to rewards/punishments Students are active participants in constructing their own understanding and knowledge Observable behavior and measurable outcomes
Evaluation is based on individual understanding and internal mental processes Classical and operant conditioning, behavior modification, reinforcement Problem-based learning, inquiry-based learning,
role of internal mental processes in learning and the acquisition of knowledge is a product of internal mental processes and can be objectively measured and assessed Teachers are facilitators who guide learners in constructing their own knowledge Teachers are
experts who provide knowledge to learners and guide them in developing their cognitive abilities students are active participants in construction of knowledge from teachers and use their cognitive abilities students are active participants in construction of knowledge from teachers and use their cognitive abilities students are receivers of knowledge from teachers and use their cognitive abilities to process information Active construction of knowledge based on experiences Internal mental
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metacognition Constructivism in the philosophy of education is the belief that learners actively construct their own knowledge and understanding of the world through their experiences, interactions, and reflections. It emphasizes the importance of learner-centered approaches, hands-on activities, and collaborative learning to facilitate meaningful
and authentic learning experiences. They might engage students in hands-on activities, such as using manipulatives or visual representations, to explore the concept visually and tangibly. The teacher would encourage discussions among students, allowing them to share their ideas and perspectives, and guide them toward discovering the relationship them to share their ideas and perspectives, and guide them toward discovering the relationship them to share their ideas and perspectives, and guide them toward discovering the relationship them to share their ideas and perspectives, and guide them toward discovering the relationship them to share their ideas and perspectives, and guide them toward discovering the relationship them to share their ideas and perspectives, and guide them toward discovering the relationship them to share their ideas and perspectives, and guide them toward discovering the relationship to the relationship to the relationship them to share their ideas and perspectives, and guide them toward discovering the relationship to the relati
between dividing by a fraction and multiplying by its reciprocal. Through guided questioning, the teacher would facilitate critical thinking and help students arrive at the understanding that dividing 1/3 by 1/3 is equivalent to multiplying by the reciprocal, resulting in a value of 1. Arends, R. I. (1998). Resource handbook. Learning to teach (4th ed.).
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Varieties of constructivism: Their metaphors, epistemologies and pedagogical implications. Hiroshima Journal of Mathematics Education, 2 (1994), 2. Fox, R. (2001). Constructivism examined. Oxford review of education, 2 (1994), 2. Fox, R. (2007). Scaffolding and Achievement in Problem-Based and Inquiry
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 J_{\rm L}, Kirschner, P. A., & Clark, R. E. (2007). Why minimally guided teaching technology and Society, 3 (2). Teaching Guide for Transforming Distance Learning. Educational Technology and Society, 3 (2). Teaching Guide for
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mathematical concepts. Constructing mathematical knowledge: Epistemology and mathematics education, 5-7. Von Glasersfeld, E. (2013). Radical constructivism(Vol. 6). Routledge, MA: Harvard University Press. A major theme in the theoretical
framework of Bruner is that learning is an active process in which learners construct new ideas or concepts based upon their current/past knowledge. The learner selects and transforms information, construct new ideas or concepts based upon their current/past knowledge. The learner selects and transforms information, construct new ideas or concepts based upon their current/past knowledge.
meaning and organization to experiences and allows the individual to go beyond the instructor and students to discover principles by themselves. The instructor should engage in an active dialog (i.e., socratic learning). The task of the instructor is to translate
information to be learned into a format appropriate to the learners current state of understanding. Curriculum should be organized in a spiral manner so that the student continually builds upon what they have already learning, (2)
the ways in which a body of knowledge can be structured so that it can be most readily grasped by the learner, (3) the most effective sequences in which to present material, and (4) the nature and pacing of rewards and punishments. Good methods for structuring knowledge should result in simplifying, generating new propositions, and increasing the
manipulation of information. In his more recent work, Bruner (1986, 1990, 1996) has expanded his theoretical framework to encompass the social and cultural aspects of learning as well as the practice of law. ApplicationBruners constructivist theory is linked
to child development research (especiallyPiaget). The ideas outlined in Bruner (1960) originated from a conference focused on science and math learning. Bruner illustrated his theory in the context of mathematics and social science programs for young children (see Bruner, 1973). The original development of the framework for reasoning processes is
described in Bruner, Goodnow & Austin (1951). Bruner (1983) focuses on language learning in young children. Note that Constructivism is a very broad conceptual framework in philosophy and science and Bruners theory represents one particular perspective. Example 1 is taken from Bruner (1973). The concept of prime numbers appears to
be more readily grasped when the child, through construction, discovers that certain handfuls of beans cannot be laid out in a single file or in an incomplete row-column design in which there is always one extra or one too few to fill the pattern. These patterns, the child learns
happen to be called prime. It is easy for the child to go from this step to the recognition that a multiple table, so called, is a record sheet of quantities in completed mutiple rows and columns. Here is factoring, multiplication and primes in a construction that can be visualized. Principles Instruction must be concerned with the experiences and contexts
that make the student willing and able to learn (readiness). Instruction must be structured so that it can be easily grasped by the student (spiral organization). References Bruner, J. (1960). The Process of Education. Cambridge, MA:
Harvard University Press. Bruner, J. (1966). Toward a Theory of Instruction. Cambridge, MA: Harvard University Press. Bruner, J. (1973). Going Beyond the Information Given. New York: Norton. Bruner, J. (1986). Actual Minds, Possible Worlds. Cambridge, MA: Harvard
University Press. Bruner, J. (1990). Acts of Meaning. Cambridge, MA: Harvard University Press. Bruner, J., Goodnow, J., & Austin, A. (1956). A Study of Thinking. New York: Wiley. Related Websites More about Bruner can be found at: Constructivism is both a learning.
theory and a philosophy of education that suggests learners actively build their knowledge through experiences and interactions. According to this theory, education should focus on problem-solving and critical thinking, encouraging learners to connect new information with prior knowledge. It emphasizes student-centered learning, where teachers
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new knowledge on the foundations of their existing knowledge. However, radical constructivism states that the knowledge in dividuals create tells us nothing about reality, and only helps us to function in your environment. Thus, knowledge is invented not discovered. Radical constructivism also argues that there is no way to directly access an objective
reality, and that knowledge can only be understood through the individuals subjective interpretation of their experiences. This theory asserts that individuals create their own understanding of reality, and that their knowledge is always incomplete and subjective. The humanly constructed reality is all the time being modified and interacting to fit
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teacher facilitates learning by providing opportunities for social interaction and collaboration. The teacher provides information and reflect on their experiences to construct their own knowledge. Learning is a social process that
involves collaboration, negotiation, negotiation, and reflection. Learning is an individual process that involves constructing meaning from ones experiences. Reality is socially constructed and subjective, and there is no one objective truth.
Reality is objective and exists independently of the learner constructs their own understanding of it. Reality is subjective truth. For example: Collaborative group work in a classroom setting. For example: Collaborative group work in a classroom setting.
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entirely on their own with no guidance. While constructivist theory emphasizes active learning and student-centered exploration, it also recognizes the critical role of structured support. Far from advocating for complete independence, constructivism encourages teachers to guide learners inquiry in a way that respects their prior knowledge while
leading them toward deeper understanding and mastery. The primary responsibility of the teacher is to create a collaborative problem-solving environment where students become active participants in their own learning. From this perspective, a teacher acts as a facilitator of learning rather than an instructor. This means that teachers need to
believe that students are capable of thinking and coming up with their own ideas. The teacher makes sure he/she understands the students preexisting conceptions, and guides the activity to address them and then build on them (Oliver, 2000). Teachers use scaffolding, providing guidance, feedback, and gradually released responsibility, to ensure
that learners neither feel overwhelmed nor forced to reinvent the wheel. Scaffolding is a key feature of effective teaching, where the adult continually adjusts the level of performance. In the classroom, scaffolding can include modeling a skill, providing hints or cues, and adapting material or activity
(Copple & Bredekamp, 2009). A constructivist classroom emphasizes active learning and help students construct their own understanding of the world. Tam (2000) lists the following four
basic characteristics of constructivist learning environments, which must be considered when implementing constructivist teaching strategies: 1) Knowledge will be shared between teachers and students will consist of small numbers
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during a social studies lesson. By adopting the perspectives of key personalities or everyday people from the past, learners not only deepen their factual understanding but also practice empathy and critical thinking. In science or math classes, teachers can spark curiosity by bringing inanimate objects to life. Have students personify shapes in
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authentic tasks, educators can cultivate an environment where students dont just memorize facts, they actively construct knowledge, connect it to their lives, and develop skills that will serve them beyond the classroom. Constructivist education moves from purely traditional grading methods, like rote memorization tests, toward more authentic,
reflective, and personalized measures of student growth. Rather than simply evaluating correct answers on an exam, teachers look for evidence of deeper thinking and the connections students make between new concepts and prior knowledge. By incorporating these authentic assessment methods, teachers honor the spirit of constructivism while
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through frequent use of the learning cycle model. (p. 116)Some theorists argue that purely discovery-based or minimally guided instruction can be ineffective, especially for novices. Critics, including Kirschner, Sweller, and Clark (2006), maintain that when students lack strong foundational skills, giving them little support can cause cognitive
overload and confusion. The rationale is that novices often need structured guidance, strategic hints, feedback, or step-by-step scaffolds, to prevent frustration and ensure consistent progress. If educators rely solely on open-ended methods, students may become disengaged or fail to master basic skills. On the other hand, balanced approaches that
blend guided instruction with opportunities for exploration can yield deeper understanding while avoiding the pitfalls of minimal guidance. This implies that teachers should adapt the level of support based on learners skill levels, ensuring the method aligns with instructional goals and student needs. Some observers question whether constructivist
teaching consistently leads to higher student achievement (Kirschner, Sweller, & Clark, 2006; Tobias & Duffy, 2009). They note that standardized tests occasionally show weaker basic skills among students who rely heavily on discovery-based methods, an issue that surfaced prominently during the math wars, when critics argued that learners were
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Duncan, & Chinn, 2007). An overly simplistic adoption of discovery-based activities may hamper basic skills acquisition and undermine standardized test performance. However, a nuanced, hybrid model, mixing direct instruction of fundamentals with active, student-driven tasks, often promotes both core competence and the deeper engagement
championed by constructivism. This combination approach can improve learners conceptual grasp while still meeting accountability requirements. Fully open-ended lessons risk neglecting essential knowledge and might be time-consuming, limiting content coverage. Constructivist activities often emphasize depth over breadth, which is beneficial for
conceptual mastery but can clash with tight curricula or standardized testing demands. Critics note that if every topic is approached via extended inquiry, learners may not receive enough direct practice in fundamental facts, procedures, or theories. Students could finish a unit with inconsistent mastery of key concepts, particularly if they need
systematic drills (e.g., in math operations) or exposure to a broad range of topics (as in survey-style courses). To address this, teachers can embed essential knowledge goals into project-based or inquiry-driven tasks, ensuring students cover mandated content while retaining the deeper engagement constructivism promotes. Constructivist classrooms
often rely on collaborative learning, raising worries that some students voices may dominate while group tasks enable peer support and multiple perspectives, they can also produce uneven participation: more vocal or advanced students may dominate, leading others to disengage. Misconceptions can also spread
unchecked if the teacher doesnt intervene in time. Without careful planning, such as assigning defined roles or mixing independent reflection with group activities, some students may fail to actively construct understanding. This pitfall can undermine a key benefit of collaboration: that learners build knowledge together. Teachers who monitor group
dynamics and provide structured tasks help ensure equity, allowing all learners to contribute meaningfully. Implementing robust constructivist lessons often demands time, resources, and group work often require smaller class sizes, greater
prep time, and specialized materials. Under high-stakes testing pressures or large classes, teachers might find it difficult to fully adopt constructivist methods. Educators may feel forced to revert to more teacher-centered approaches to cover content swiftly and meet external standards. As a result, some adopt a mixed instructional model, infusing
constructivist activities where feasible while maintaining direct instruction when necessary. This hybrid strategy helps reconcile the ideals of student-driven exploration with real-world classroom constraints. Behaviourism Constructivism Emphasizes the role of the environment and external factors in behavior Emphasizes the role of internal mental
processes in learning and knowledge creation Knowledge is gained through external stimuli and observable behaviors Knowledge to students Teachers are facilitators who guide students in constructing their own knowledge
Students are passive receivers of knowledge and respond to rewards/punishments Students are active participants in constructing their own understanding and knowledge Observable behavior and measurable outcomes
Evaluation is based on individual understanding and internal mental processes Classical and operant conditioning, behavior modification, reinforcement Problem-based learning, inquiry-based learning, cognitive apprenticeship Constructivism Emphasizes the
role of internal mental processes in learning and the acquisition of knowledge is a product of internal mental processes and can be objectively measured and assessed Teachers are facilitators who guide learners in constructing their own knowledge Teachers are
experts who provide knowledge to learners and guide them in developing their cognitive abilities students are receivers of knowledge from teachers and use their cognitive abilities to process information Active construction of knowledge based on experiences Internal mental
processes and information processing Evaluation is based on individual understanding and internal mental processes Evaluation is based on objectively measurable outcomes and mastery of specific knowledge and skills Problem-based learning, inquiry-based learning, cognitive apprenticeship Information processing theory, schema theory,
metacognition Constructivism in the philosophy of education is the belief that learners actively construct their own knowledge and understanding of the world through their experiences, interactions, and reflections. It emphasizes the importance of learner-centered approaches, hands-on activities, and collaborative learning to facilitate meaningful
and authentic learning experiences. They might engage students in hands-on activities, such as using manipulatives or visual representations, to explore the concept visually and tangibly. The teacher would encourage discussions among students, allowing them to share their ideas and perspectives, and guide them toward discovering the relationship them to share their ideas and perspectives, and guide them toward discovering the relationship them to share their ideas and perspectives, and guide them toward discovering the relationship them to share their ideas and perspectives, and guide them toward discovering the relationship them to share their ideas and perspectives, and guide them toward discovering the relationship them to share their ideas and perspectives, and guide them toward discovering the relationship them to share their ideas and perspectives, and guide them toward discovering the relationship them to share their ideas and perspectives, and guide them toward discovering the relationship them to share the relationship to the relationship to the relationship them to share the relationship to the rela
between dividing by a fraction and multiplying by its reciprocal. Through guided questioning, the teacher would facilitate critical thinking and help students arrive at the understanding that dividing 1/3 by 1/3 is equivalent to multiplying by the reciprocal, resulting in a value of 1. Arends, R. I. (1998). Resource handbook. Learning to teach (4th ed.)
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mathematical concepts. Constructing mathematical knowledge: Epistemology and mathematics education, 5-7. Von Glasersfeld, E. (2013). Radical constructivism (Vol. 6). Routledge. Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Cambridge, MA: Harvard University Press. Constructivism is both a learning
theory and a philosophy of education that suggests learners actively build their knowledge through experiences and interactions. According to this theory, education should focus on problem-solving and critical thinking, encouraging learners to connect new information with prior knowledge. It emphasizes student-centered learning, where teachers
guide rather than direct, fostering deep understanding and application. Active Knowledge by relating new ideas to prior experiences and frameworks. Meaning Making: Knowledge is not simply transmitted; it is interpreted and understood in the context
of each learners existing worldview. Learner-Centered Approach: The learners perspective, interests, and cultural background play a significant role in shaping the learning process. Rather than passively receiving information, learners reflect on their experiences, create mental representations, and incorporate new knowledge into their schemas. This
promotes deeper learning and understanding. Influential Theorists: John Dewey (1859-1952): Advocated for experiential learning, stressing that education should be grounded in real-life activities and problem-solving. Maria Montessori (1870-1952): Developed a child-centered approach emphasizing self-directed, hands-on learning within a thoughtfully
prepared environment. She believed that children build independence and deeper insight through exploration and purposeful activities. Jean Piaget (1896-1980): Focused on the stages of cognitive development and how children activities. Jean Piaget (1896-1980): Focused on the stages of cognitive development and how children build independence and deeper insight through interaction with the environment. Lev
context of learning; introduced the idea of the Zone of Proximal Development (ZPD) and the critical role of social interaction and scaffolding. Jerome Bruner (1915-2016): Emphasized discovery learning where learners actively build new ideas upon existing knowledge. He also developed the spiral curriculum concept, which involves revisiting topics at
increasing levels of complexity to build deeper understanding. 5 Tips for Teachers: Begin with Real-World Questions or scenarios. This sparks curiosity and sets a clear purpose for exploration and discovery. Asking Why? or How can we test that? prompts learners to articulate their though
processes, clarify misconceptions, and refine their ideas in response to peer or teacher feedback. Activate Prior Knowledge: One effective way to begin is by creating structured opportunities for students to brainstorm or reflect on what they already know about a topic. For instance, you might use a K-W-L chart (What I Know, What I Want to Kno
What I Learned) before starting a new unit. Alternatively, have small groups discuss or write down related experiences or keywords they associate with the subject matter. Interactive, Exploratory Environments: Classrooms should invite hands-on activities, discussion, and inquiry, allowing learners to test ideas and refine their understanding. Provide
Strategic Scaffolding: Offer guidance and support, through hints, examples, or feedback, without completely directing the experience. Gradually reduce help as students gain confidence. Assessment Focused on Understanding: Measures of success should emphasize deep comprehension, application, and critical thinking rather than memorized facts
New information is interpreted through existing mental frameworks rather than simply absorbed. This idea lies at the heart of constructivism, which asserts that learners actively build new understanding on what they already know (Phillips, 1995). In other words, the knowledge and experiences students bring into the classroom influence how they
process and adopt new concepts. Jerome Bruners concept of the spiral curriculum further emphasizes this point by suggesting that key topics and ideas be revisited multiple times at increasingly complex levels (Bruner, 1960). Each return to a concept allows learners to build on previously established knowledge, deepen their understanding, and refine
any misconceptions. By consistently spiraling back to foundational topics, educators ensure that prior knowledge remains a living, evolving base for future learning. Constructivism holds that learning demands active engagement rather than passive reception of facts. Learners must interact with and question ideas, not merely hear them. The passive
view of teaching views the learner as an empty vessel to be filled with knowledge, whereas constructivism states that learners construct meaning only through active engagement with the world. Information may be passively received, but understanding cannot be. Understanding must come from making meaningful connections between prior
knowledge, new knowledge, and the processes involved in learning. John Dewey believed students need to confront real-life problems and reflect on the consequences in a deep, emotional way. Without this active experience, learners may only adopt superficial habits and miss genuine conceptual change. Constructivism also highlights the social aspect
of knowledge construction (Dewey, 1938). Learning is both an individual and a collaborative endeavor. Dialogue and collaborative endeavor. Dialogue and collaboration help refine thinking. By sharing ideas, learning is a matter of sharing and negotiating socially constituted
knowledge. For example, Vygotsky (1978) states cognitive development as children and their partners co-construct knowledge is shaped socially, each learners unique perspective matters. Cultural background and personal experiences
inevitably color how individuals interpret the same lesson or activity. For Vygotsky, the environment in which children grow up will influence how they think and what they think about. This means that same lesson, teaching or activity may result in different learning by each pupil, as their subjective interpretations differ. This principle appears to
contradict the view the knowledge is socially constructed. Fox (2001, p. 30) argues: Although individuals have their own personal history of learning, nevertheless they can share in common knowledge, and Although education is a social process powerfully influenced by cultures are made up of sub-cultures, even to the point of being
composed of sub-cultures of one. Cultures and their knowledge base are constantly in a process of change and the knowledge resides in the learners mental models and
need not perfectly mirror an external reality (Driscoll, 2000). People continuously update their personal map of the world, interpreting each new experience in light of what they already believe and know. With every meaningful interaction, learners refine or reorganize these mental models, actively constructing (and reconstructing) their own
understanding of reality. Typically, this continuum is divided into three broad categories: Cognitive constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constr
something that is actively constructed by learners based on their existing cognitive structures. Therefore, learning is relative to their existing knowledge, and enabling them to make the appropriate modifications to their existing
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not mastering fundamental procedures by inventing algorithms on their own. Research on this topic, however, remains mixed: while certain studies highlight gains in critical thinking and conceptual understanding under constructivist methods, they also emphasize the importance of clear guidance and structured support (Mayer, 2004; Hmelo-Silver,
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dynamics and provide structured tasks help ensure equity, allowing all learners to contribute meaningfully. Implementing robust constructivist lessons often demands time, resources, and group work often require smaller class sizes, greater
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theory and a philosophy of education that suggests learners actively build their knowledge through experiences and interactions. According to this theory, education should focus on problem-solving and critical thinking, encouraging learners to connect new information with prior knowledge. It emphasizes student-centered learning, where teachers
guide rather than direct, fostering deep understanding and application. Active Knowledge by relating new ideas to prior experiences and frameworks. Meaning Making: Knowledge is not simply transmitted; it is interpreted and understood in the context
of each learners existing worldview. Learner-Centered Approach: The learners perspective, interests, and cultural background play a significant role in shaping the learners perspective, interests, and cultural background play a significant role in shaping the learners perspective, interests, and cultural background play a significant role in shaping the learners perspective, interests, and cultural background play a significant role in shaping the learners perspective, interests, and cultural background play a significant role in shaping the learners perspective, interests, and cultural background play a significant role in shaping the learners perspective, interests, and cultural background play a significant role in shaping the learners perspective, interests, and cultural background play a significant role in shaping the learners perspective, interests, and cultural background play a significant role in shaping the learners perspective, interests, and cultural background play a significant role in shaping the learners perspective, interests, and cultural background play a significant role in shaping the learners perspective, interests, and cultural background play a significant role in shaping the learners perspective, interests, and cultural background play a significant role in shaping the learners perspective.
promotes deeper learning and understanding. Influential Theorists: John Dewey (1859-1952): Advocated for experiential learning, stressing that education should be grounded in real-life activities and problem-solving. Maria Montessori (1870-1952): Developed a child-centered approach emphasizing self-directed, hands-on learning within a thoughtfully
prepared environment. She believed that children build independence and deeper insight through exploration and purposeful activities. Jean Piaget (1896-1980): Focused on the stages of cognitive development and how children actively build their knowledge through interaction with the environment. Lev Vygotsky (1896-1934): Emphasized the social
context of learning; introduced the idea of the Zone of Proximal Development (ZPD) and the critical role of social interaction and scaffolding. Jerome Bruner (1915-2016): Emphasized discovery learning where learners actively build new ideas upon existing topics at
increasing levels of complexity to build deeper understanding. 5 Tips for Teachers: Begin with Real-World Questions: Launch each lesson by posing relevant, open-ended questions or scenarios. This sparks curiosity and sets a clear purpose for exploration and discovery. Asking Why? or How can we test that? prompts learners to articulate their thought
processes, clarify misconceptions, and refine their ideas in response to peer or teacher feedback. Activate Prior Knowledge: One effective way to begin is by creating structured opportunities for students to brainstorm or reflect on what I Want to Know, What I Want to Know,
What I Learned) before starting a new unit. Alternatively, have small groups discuss or write down related experiences or keywords they associate with the subject matter. Interactive, Exploratory Environments: Classrooms should invite hands-on activities, discussion, and inquiry, allowing learners to test ideas and refine their understanding. Provide
Strategic Scaffolding: Offer guidance and support, through hints, examples, or feedback, without completely directing the experience. Gradually reduce help as students gain confidence. Assessment Focused on Understanding: Measures of success should emphasize deep comprehension, application, and critical thinking rather than memorized facts
New information is interpreted through existing mental frameworks rather than simply absorbed. This idea lies at the heart of constructivism, which asserts that learners actively build new understanding on what they already know (Phillips, 1995). In other words, the knowledge and experiences students bring into the classroom influence how they
process and adopt new concepts. Jerome Bruners concept of the spiral curriculum further emphasizes this point by suggesting that key topics and ideas be revisited multiple times at increasingly complex levels (Bruner, 1960). Each return to a concept allows learners to build on previously established knowledge, deepen their understanding, and refined to the spiral curriculum further emphasizes this point by suggesting that key topics and ideas be revisited multiple times at increasingly complex levels (Bruner, 1960). Each return to a concept allows learners to build on previously established knowledge, deepen their understanding, and refined knowledge and ideas be revisited multiple times at increasingly complex levels (Bruner, 1960). Each return to a concept allows learners to build on previously established knowledge, deepen their understanding, and refined knowledge and ideas be revisited multiple times at increasingly complex levels (Bruner, 1960). Each return to a concept allows learners to build on previously established knowledge, deepen their understanding and refined knowledge and the spiral curriculum further emphasizes this point by suggesting the spiral curriculum further emphasizes the spiral cu
any misconceptions. By consistently spiraling back to foundational topics, educators ensure that prior knowledge remains a living, evolving base for future learning. Constructivism holds that learning demands active engagement rather than passive reception of facts. Learners must interact with and question ideas, not merely hear them. The passive
view of teaching views the learner as an empty vessel to be filled with knowledge, whereas constructivism states that learners construct meaning only through active engagement with the world. Information may be passively received, but understanding cannot be. Understanding must come from making meaningful connections between prior
knowledge, new knowledge, and the processes involved in learning John Dewey believed students need to confront real-life problems and reflect on the consequences in a deep, emotional way. Without this active experience, learners may only adopt superficial habits and miss genuine conceptual change. Constructivism also highlights the social aspect
of knowledge construction (Dewey, 1938). Learning is both an individual and a collaborative endeavor. Dialogue and collaboration help refine thinking. By sharing ideas, learning is a matter of sharing and negotiating socially constituted
knowledge. For example, Vygotsky (1978) states cognitive development as children and their partners co-construct knowledge is shaped socially, each learners unique perspective matters. Cultural background and personal experiences
inevitably color how individuals interpret the same lesson or activity. For Vygotsky, the environment in which children grow up will influence how they think about. This means that same lesson, teaching or activity may result in different learning by each pupil, as their subjective interpretations differ. This principle appears to
contradict the view the knowledge is socially constructed. Fox (2001, p. 30) argues: Although individuals have their own personal history of learning, nevertheless they can share in common knowledge, and Although education is a social process powerfully influenced by cultures are made up of sub-cultures, even to the point of being
composed of sub-cultures of one. Cultures and their knowledge base are constantly in a process of change and the knowledge resides in the learners mental models and
need not perfectly mirror an external reality (Driscoll, 2000). People continuously update their personal map of the world, interpreting each new experience in light of what they already believe and know. With every meaningful interaction, learners refine or reorganize these mental models, actively constructing (and reconstructing) their own
understanding of reality. Typically, this continuum is divided into three broad categories: Cognitive constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constructivism, based on the work of Jean Piaget; social constr
something that is actively constructed by learners based on their existing cognitive structures. Therefore, learning is relative to their stage of cognitive development. Cognitive teaching methods aim to assist students in assimilating new information to existing knowledge, and enabling them to make the appropriate modifications to their existing
intellectual framework to accommodate that information. According to social constructivism, learning is a collaborative process, and knowledge develops from individuals interactions with their culture and society. Social constructivism was developed by Lev Vygotsky (1978, p. 57), who suggested that: Every function in the childs cultural development
appears twice: first, on the social level and, later on, on the individual level; first, between people (interpsychological). The notion of radical constructivism was developed by Ernst von Glasersfeld (1974) and states that all knowledge is constructed rather than perceived through senses. Learners construct
new knowledge on the foundations of their existing knowledge is invented not discovered. Radical constructivism also argues that there is no way to directly access an objective and only helps us to function in your environment. Thus, knowledge is invented not discovered. Radical constructivism also argues that there is no way to directly access an objective and only helps us to function in your environment.
reality, and that knowledge can only be understood through the individuals create their own understanding of reality, and that their knowledge is always incomplete and subjective. The humanly constructed reality is all the time being modified and interacting to fit
ontological reality, although it can never give a true picture of it. (Ernest, 1994, p. 8) Knowledge is constructed through mental processes such as attention, perception, and memory. Knowledge is constructed by the individual through their subjective experiences and
interactions with the world. The learner is an active participant in the constructs knowledge and learning is a social process. The learner is the sole constructor of knowledge and meaning, and their reality is subjective and constantly evolving. The
teacher facilitates learning by providing opportunities for social interaction and collaboration. The teacher provides information and reflect on their experiences to construct their own knowledge. Learning is a social process that
involves collaboration, negotiation, and reflection. Learning is an individual process that involves mental process that involves constructing meaning from ones experiences. Reality is socially constructed and subjective, and there is no one objective truth
Reality is objective and exists independently of the learner constructs their own understanding of it. Reality is subjective and constantly evolving, and there is no one objective truth. For example: Reflecting on
personal experiences to construct meaning and understanding. Constructivism is a way of teaching where instead of just telling students what to believe, teachers encourage them to think for themselves. This educational approach emphasizes active learning and student-centered exploration. Constructivism does not equate to students learning
entirely on their own with no guidance. While constructivist theory emphasizes active learning and student-centered exploration, it also recognizes the critical role of structured support. Far from advocating for complete independence, constructivism encourages the critical role of structured support.
leading them toward deeper understanding and mastery. The primary responsibility of the teacher is to create a collaborative problem-solving environment where students become active participants in their own learning. From this perspective, a teacher acts as a facilitator of learning rather than an instructor. This means that teachers need to
believe that students are capable of thinking and coming up with their own ideas. The teacher makes sure he/she understands the students preexisting conceptions, and guidance, feedback, and gradually released responsibility, to ensure
that learners neither feel overwhelmed nor forced to reinvent the wheel. Scaffolding is a key feature of effective teaching, where the adult continually adjusts the level of his or her help in response to the learners level of performance. In the classroom, scaffolding can include modeling a skill, providing hints or cues, and adapting material or activity
(Copple & Bredekamp, 2009). A constructivist classroom emphasizes active learning, collaboration, viewing a concept or problem from multiple perspectives, reflection, students construct their own understanding of the world. Tam (2000) lists the following four
basic characteristics of constructivist learning environments, which must be considered when implementing constructivist teaching strategies: 1) Knowledge will be shared between teachers and students. 2) Teachers and students will share authority. 3) The teachers role is one of a facilitator or guide. 4) Learning groups will consist of small numbers
of heterogeneous students. Traditional ClassroomConstructivist ClassroomConstr
to students; students are recipients of knowledge (passive learning). Teachers role is directive, rooted in authority. Teachers role is interactive, rooted in negotiation. Students work primarily alone (competitive). Students work primarily in groups
(cooperative) and learn from each other. While constructivism emphasizes active engagement and learner-centered exploration, these core principles truly come alive when teachers use innovative, subject-specific strategies. One effective technique involves role-playing activities. For instance, letting students step into the shoes of historical figures
during a social studies lesson. By adopting the perspectives of key personalities or everyday people from the past, learners not only deepen their factual understanding but also practice empathy and critical thinking. In science or math classes, teachers can spark curiosity by bringing inanimate objects to life. Have students personify shapes in
geometry or imagine chemical elements interacting at a party, an approach that helps them internalize abstract concepts in a fun, memorable way. Another vital practice is asking open-ended questions that challenge students to analyze, predict, or hypothesize. Far more than simple yes/no queries, these thought-provoking prompts encourage
authentic tasks, educators can cultivate an environment where students dont just memorize facts, they actively construct knowledge, connect it to their lives, and develop skills that will serve them beyond the classroom. Constructivist education moves from purely traditional grading methods, like rote memorization tests, toward more authentic,
reflective, and personalized measures of student growth. Rather than simply evaluating correct answers on an exam, teachers look for evidence of deeper thinking and the connections students make between new concepts and prior knowledge. By incorporating these authentic assessment methods, teachers honor the spirit of constructivism while
still maintaining accountability. Students gain a deeper sense of ownership over their learning, and educators gain richer insights into each individuals thought process, growth, and mastery of the material. Students curate samples of their work over time, such as essays, problem solutions, sketches, or lab reports, while reflecting on how their
understanding has evolved. Learning logs or journals encourage them to articulate what theyre learning, track their progress, and set personal goals. Instead of requiring a single test at the end of a unit, performance-based assessments challenge learners to solve real-world problems or engage in hands-on projects. Presentations, simulations, or
 demonstrations can snow now students synthesize knowledge, apply critical thinking, and collaborate with peers. Constructivist classrooms often use rubrics that emphasize process, creativity, and depth of understanding. Leachers can create criteria for now well students research, communicate, or reflect on their findings
feedback than just a letter grade. Exhibitions or showcases allow learners to present projects to classmates, parents, or community members, while peer review sessions build evaluation skills and encourage constructive feedback. In this way, assessment becomes an ongoing dialogue rather than a one-time result. Honebein (1996) summarizes the
seven pedagogical goals of constructivist learning environments: To provide experience with the knowledge construction for multiple perspectives (evaluation of alternative solutions). To embed learning in realistic contexts (authentic tasks). To encourage
ownership and a voice in the learning process (student-centered learning). To embed learning in social experience (collaboration). To encourage awareness of the knowledge construction process (reflection, metacognition). Encourage and accept student autonomy and
initiative. (p. 103) Use raw data and primary sources, along with manipulative, interactive, and physical materials. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify, analyze, predict, and create. (p. 104) When framing tasks, use cognitive terminology such as classify.
understandings of the concepts before sharing [your] own understandings of those concepts. (p. 107) Encourage student inquiry by asking thoughtful, open-ended questions and encouraging students to ask questions of each other. (p. 110) Seek
elaboration of students initial responses. (p. 111) Engage students in experiences that might engender contradictions to their initial hypotheses and then encourage discussion. (p. 112) Allow wait time after posing questions. (p. 113) Nurture students in experiences that might engender contradictions to their initial hypotheses and then encourage discussion. (p. 114) Provide time for students in experiences that might engender contradictions to their initial hypotheses and then encourage discussion.
through frequent use of the learning cycle model. (p. 116)Some theorists argue that purely discovery-based or minimally guided instruction can be ineffective, especially for novices. Critics, including Kirschner, Sweller, and Clark (2006), maintain that when students lack strong foundational skills, giving them little support can cause cognitive
overload and confusion. The rationale is that novices often need structured guidance, strategic hints, feedback, or step-by-step scaffolds, to prevent frustration and ensure consistent progress. If educators rely solely on open-ended methods, students may become disengaged or fail to master basic skills. On the other hand, balanced approaches that
blend guided instruction with opportunities for exploration can yield deeper understanding while avoiding the pitfalls of minimal guidance. This implies that teachers should adapt the level of support based on learners skill levels, ensuring the method aligns with instructional goals and student needs. Some observers question whether constructivist
teaching consistently leads to higher student achievement (Kirschner, Sweller, & Clark, 2006; Tobias & Duffy, 2009). They note that standardized tests occasionally show weaker basic skills among students who rely heavily on discovery-based methods, an issue that surfaced prominently during the math wars, when critics argued that learners were
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