



Research Paper

A Study of Digital Divide and Online Learning Habits of Senior Secondary School Students during Covid-19 Pandemic

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Abstract

The study aims to explore the digital divide and online learning habits of senior secondary school students during the COVID-19 pandemic. The research was conducted in a senior secondary school in Chandigarh, India. The study was conducted during the period of the COVID-19 pandemic, which was a significant event in the world. The study was conducted during the period of the COVID-19 pandemic, which was a significant event in the world. The study was conducted during the period of the COVID-19 pandemic, which was a significant event in the world.

Keywords

COVID-19, digital divide, online learning, senior secondary school students

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Introduction

The digital divide is a significant issue in the world, especially during the COVID-19 pandemic. The digital divide is a significant issue in the world, especially during the COVID-19 pandemic. The digital divide is a significant issue in the world, especially during the COVID-19 pandemic.

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tahw morf era nerdlihc eseht fo rebmun egral a dna cimednap eht fo esuaceb detpurretni noitacude rieht .nerdlihc noillib 1.26 eht fo noillim 300 gnitubirtnoc aidnI htiw ,esahp “hcet on ro hcet wol” eht sllac OCSENU dna metsys lanoitacude ruo fo eroc eht detpursid yltnacifingis sah cimednap 19 -divoC taht tnedive s’tI .seitilibarenluy ynam sti dethgilhgih

denifed stpecnoC
gninraeL

dna ,sedutitta ,seulav ,slliks ,sroivaheb ,egdelwonk ,gnidnatsrednu wen gniriuqca fo ssecorp eht si gninraeL rof ecnedive osla si ereht ;senihcam emos dna ,slamina ,snamuh yb dessessop si nrael ot ytiliba ehT .secnereferp .stnalp niatrec ni gninrael fo dnik emos

gninrael enilnO

gnoma “gninrael -e” sa ot derrefer netfo si tI .tenretnI eht revo ecalp sekataht noitacude si gninrael enilnO gninrael yna rof mret allerbmua eht - “gninrael ecnatsid” fo epyt eno tsuj si gninrael enilno ,revewoH .smret rehto .moorssalc lanoitidarta ni ton dna ecnatsid ssorca ecalp sekataht

edivid latigiD

ssecca evah t’nod ohw esoht dna secived latigid evah ohw esoht gnoma si hcihw pag taht ot srefer edivid latigiD .yadot ytilaer hcum yrev si edivid latigid eht ,2020 raey eht nI .secived latigid ot

ton era emos dna TCI htiw detadpu era taht saera dna scihpargomed neewteb ecnereffid eht si ti ,revoeroM .ti htiw detadpu ro ssecca gnivah

latigid fo noitubirtsid nevenu sti ,revoeroM .ytilauqeni yllacimonoce dna yllaicos na yllacisab si edivid latigiD saw stibah gninrael dna sredneg gnoma ytirapsid dna tsap eht ni tnelaverp osla saw tI .yteicos eht ni secived .ereht

stibah yduts

,stset rof gniraperp nehwyllautibah dna yllaluger ni segagne tneduts a taht noitca ro roivaheb si tibah yduts deredisnoc era dna elor tnacifingis a yalp stibah yduts .ksat eht etelpmoc ot redro ni lairetam gninrael cimedaca .gninrael rof lufesu dna ,sedarg doog gniriuqca ot tnacifingis

gniniag fo ssecorp eht gnirud sciped eno taht ecitcarp dna seicnednet raluger eht sa denifed era stibah yduts ni elor gib a yalp stibah yduts .stibah yduts tnereffid sah su fo eno hcaE .gninrael hguorht noitamrofni .ssecorp gninrael eht ni sseccus a gninimreted

yduts doog ,revoeroM .enituor yliad a ot gnipeek naem stibah yduts dooG .dab ro doog eb nac stibah yduts .sseccus s’eno ni elor tnacifingis a yalp stibah yduts dooG .emit dna tnehtaert lauqe stcejbus lla gnivig stibah

fo erusolc eht ot del ylkciuq cimednap 19 -DIVOC eh t denimaxe dna hcraeser detcudnoc (2020) yhpuruM dluoc gnicnatsid laicos fo ecivda ‘slaiciffo htlaeh cilbup taht sepho ni ,dlrow eht dnuora segelloc dna seitisrevinu loohcs negahnepoC no gninarD .esaesid eht morf seitilataf latot ecuder dna evruc noitcefnI eht nettalf ot pleh deugra I ,seitisrevinu naciremA ta gninraeLe ycnegreme fo snoitaralced 25 gnizylana dna yroeht noitazitiruces a sa detneserp osla saw gniloohcs ecaf-ot-ecaf ,taerht lareneg a sa demarf gnieb 19 -DIVOC ot noitidda ni taht

fo noitseuq eht ot noitnetta ralucitrap htiw—yroeht noitazitiruces fo weiver A .seicilop eseht hguorht taerht I .yllaciteroeht noitagitsevni eht dednuorg—noitapicname ot noitazitirucesed fo pihsnoitaler eht dna ycacovda (gnidnatsrednu dna) gnivresbo rof ylno ton srotacude rof loot tnatropmi na saw yroeht noitazitiruces taht deugra eht retfa gniloohcs fo noitazitiruces-ed eht gnitacovda rof osla tub ,gninraeLe ycnegreme fo nonemonehp eht .dessap sisirc 19-DIVOC

,cimednap 19 -DIVOC saw yduts eht fo sucof niam eht taht dnuof dna hcraeser a detcudnoc (2021) uY na taht dnuof dna 19 -DIVOC fo cimednap tnapmar eht htiW ytilanosreP dna redneG ,slevel lanoitacude

ot demia yduts siht .sehcaorppa gninrael enilno hguorht egdelwonk gniriuqca erew elpoep fo rebmun gnisaercni siht ,ngised dexim a hguorht .emit laiceps siht gnirud ssenevitceffe gninrael enilno evorpmi ot woh etagitsevni saw tI .semoctuo gninrael enilno no stiar ytilanosrep dna ,redneg ,slevel lanoitacude fo tceffe eht delaever yduts srenrael ,gninrael enilno ni (553 =N) setaudargrednu demrofreptuo (599 =N) setaudargtsop taht dedulcnoc

wena ot ssennepo dna ,ssensuoitneicsnoc ,ssenelbaerga sa hcus stiar ytilanosrep gnorts htiw (1152=N) evorpmi dluoc hcraeser erutuF .msicitoruen dna noisrevertxe gnorts htiw esoht demrofreptuo ecneirepxe ot woh no sucof ,murof noissucsid enilno eht ni sdrow tsop ot srenrael egaruocne dna snoitcaretni lanosrepretni dna ,stnetnoc enilno eht fo cimanyd dna ytilauq eht evorpmi ot woh dna gninrael enilno gnidloffacs ngised .gninrael ecaf-ot-ecaf lanoitidarta ro enilno ylerem rehtie naht rehtar gninrael dednelb thgilhgih

hcraeser eht fo sucof niam eht taht dnuof dna hcraeser a detcudnoc (2021) rotciV ,edaukaF ,tnemelC ,ecnerwaL latnerap dna ;noitapicitrap gninrael ;stnemtimmoc gnael enilno ;nwodkcol 19-DIVOC ;srenrael tnechseloda saw sti niatnoc ot gnitpmetta ,cimednap (19-DIVOC) 2019 -esaesid suriv anoroc gnitacuse eht gniruD .tnemevlovni seitivitca gninrael dna gnihcaet ecaf-ot-ecaf nwod tuhs snoitutitsni lanoitacude fo rebmun egral a ,daerps

ni smetsys noitacude fo seitilibarenluv gnigreme delaever nwoedkcol sihT .nwoedkcol etelpmoc a ot eud yllabolg yduts hcraeser sihT .noitpece on gnieb airegiN htiw ,dlrow eht fo seirtnuoc emocni-elddim dna wol eht tnceseloda fo gninrael enilno ot tneimmoc eht dna noitapicitrap gninrael ,tneemlovni latnerap dessessa yevrus enilno na saw atad tcelloc ot desu dothem ehT .airegiN ni nwoedkcol 19 -DIVOC eht gnirud srenrael eht fo hcae fo selor yrotubirtnoc eht dna tneimmoc gninrael enilno fo level eht enimaxe ot eriannoitseq elamef ;%38.8 = elam) tnceseloda 1407 ,latot nI .srenrael tnceseloda fo tneimmoc gninrael enilno ot srotcaf nepo saw hcihw ,yevrus enilno eht ot dednopser (4.24 = DS :15 = naem) sraey 20 dna 12 neewteb dega (%61.2 scitsitats laitnerafni dna noitubirtsid yceneuqerf fo scitsitats evitpirsed gnisu desylana erew ataD .shtnom2 rof gninrael enilno ot srenrael tnceseloda fo level tneimmoc eht taht delaever sgnidnif ehT .noisserger elpitlum fo fo noitciderp eht ni ecnairav $0.192 = 2R$ dna $0.439 = R$ fo tneiciffeoc a dedleiy rehtruf sgnidnif ehT .hgih saw noitapicitrap gninrael dna ($0.05 > p$, $0.322 = \beta$) %32 detubirtnoc tneemlovni latneraP .erusaem emoctuo eht dna tneemlovni latnerap taht saw tuser ehT .gninrael enilno sdrawot ($0.05 > p$, $0.234 = \beta$) %23 detubirtnoc sdrawot srenrael tnceseloda fo tneimmoc eht ni elor evitisp dna tnacifingis a deyalp noitapicitrap gninrael ot degaruocne eb stnerap taht detseggus srohtua ehT .airegiN ni nwoedkcol 19-DIVOC eht gnirud gninrael enilno si tcejbus eht no hcraeser htped-ni rehtruf rof deen eht elihw ,noitulover dezilatigid eht htiw esigrenys .hcraeser erutuf rof snoitseggus eht ni desisahpme

ni segnahc htiw os dna tnatsnoc ylno eht saw egnahc taht denimaxe dna hcraeser a detcudnoc (2018) ihsapaT si ygolohcnet dlrow s'yadot ni dna yadot detadtuo semoceb yadretsey tsetal saw tahW .segnahc dlrow ,emit gnissim fo seitilibissop eht neht demrofni dna deppiuqe llew ton saw eno fi taht ecap tsaf a hcus ta gnignahc wen nrael tsum eno dna elbativeni saw egnahc hguohT .elbativeni si efil ni seitinutropo tnatropmi ynam ni ecap emas eht ta ecalp gnikat ton saw fleseno gnippiuqe ,dlrow gnignahc reve siht ot tpada ot seigolonhcet dna gnipoleved saerehw retsaf denrael dna deppiuqe retteb erew seirtnuoc depoleveD .dlrow eht fo renroc yreve .slliks gninrael dna ssecca larutcurtsarfni fo kcal ot eud segnahc tneimelpmi ot deliaf seirtnuoc depoleved rednu ygolohcnet gnissenrah ni elpoep dna ecar ,seiteicos ,seirtnuoc gnoma noisivid a ot gnidael saw ecnereffid sihT erolpxe ot repap siht hguorht rehcreaser eht yb edam saw tpmetta nA .edivid latigid sa demret saw dna ylluftiurf eht yb egasu sti dna tenretni fo noitartenepe eht tnorf eht ot thguorb dna aidnI ni detsixe taht edivid latigid eht ot repap eht ni dethgilhgih saw margorP aidnI latigiD suoitibma eht rednu sevitaaitini eht ,osla ;aidnI ni elpoep .yteicos latigid a otni flesti gnimrofsnart ni ssergorp s'aidnI tuo dnif

eht debircsed 'sredneg neewteb edivid latigid' mret eht denimaxe dna hcraeser detcudnoc (2019) ameehC fo smrof nredom fo ytilibaliava eht gnidrager nemow dna nem neewteb secnereffid evitatitnauc dna evitailauc dah seiteicos depoleved ynam ,noitazinredom fo are siht nI .(TCI) ygolohcnet noitacinummoc dna noitamrofni ni gnieb llew hsirehc dluow tenretni eht gnisu taht srebmem sti gnoma edutitta na hcus etaclucni ot gniyrt neeb neeb dah ,noitalupop s'dlrow eht fo trap rojam a gnimrof etipsed ,nemow ,revewoH .efil fo serehps suoirav fo mlaer eht ni stnartne etal ,ecneh dna cibohponhcet sa demeed erew yehT .rotces TCI eht ni detneserperrednu ot dedeen ,revewoh ,dnert sihT .tnanimod-elam yllareng sa nekat suht saw hcihw ,(TI) ygolohcnet noitamrofni ,txetnoc siht nI .efil rieht ni tenretni eht fo esu ekam ot dedausrep eb ot thguo deklaf nemow eht dna desiver eb ni noitisoppo elbaredisnoc decap dna eussi tnacifingis a sa degreme dah ytilauqe redneg latigid fo melborp eht ,suht ,yduts ehT .sredaer eht gnoma ssenerawa etaerc ot ti nupu etarobale ot dediced ,erofereht ,I .ytinumoc eht osla dna ytinumoc labolg eht fo sevitepsrep larutluc-oicos no TCI gnigreme tsaf fo tcapmi eht nupu detcelfer .selamef fo ytiruces enilno eht ot taerht eht nupu

,sserts cimedaca saw yduts siht fo sucof niam ehT dna hcraeser a detcudnoc (2021) inilaN dna htamaK ,yttehS cimedaca fo srotacidni laicure erew stibah yduts dna sserts cimedacA .stneduts etaudargrednu dna stibah yduts saw yduts tneserp ehT .sserts cimedaca otni stneduts eht no desserp stibah yduts ytuaf ,tmemom eht tA .sseccus dothem ehT .ecneics htlaeh fo stneduts ytisrevinu fo stibah yduts dna sserts cimedaca eht yfitedi ot detcudnoc etaudargrednu 150 gnoma detcudnoc saw tI .yevrus evitpirsed lanaitces-ssorc eht saw hcraeser siht ni dedulcni gnilmnas modnar deifitarts A .(puorg hcae ni 50 = n) ycamrahp dna ,yparehtoisyp ,gnisrun fo stneduts saw stibah yduts dna sserts cimedaca no noitamrofni ehT .stnapicitrap yduts eht tceles ot desu saw euqinhcet .ylevitcepser ,yrotnevnI tibaH ydutS amrahS dna enaslaP dna yrotnevnI ssertS tnedutS eht gnisu yb detcelloc 16.463 ± 75.353 eb ot dnuof saw sserts cimedaca fo erocs naeM - siht ekil erew yduts siht fo stluser ehT $(0.013 = p)$ stneduts gnisrun dna yparehtoisyp ot derapmoc sserts fo level rehgih a dah stneduts ycamrahP naem a htiw ,%72 saw stneduts etaudargrednu gnoma stibah yduts yrotcafsitasnu fo ecnelaverp eht ,eromrehtruF dna yparehtoisyp ot derapmoc stibah yduts fo level rehgih a dah stneduts gnisrun ,osla 9.152 ± 52.7 fo erocs $= r$) sserts cimedaca dna stibah yduts neewteb dnuof pihsnoitaler tnacifingis on saw erehT .stnedutS ycamrahp sa $(0.021 = p)$ redneg dna stibah yduts neewteb dnuof noitaicossa tnacifingis a saw erehT $(0.557 = p$, 0.048 -tsrif dna ,egatnecrep esruoC ytisrevinU-erP ,epyt esruoc dna level sserts neewteb dnuof noitaicossa eht llew yduts roop dna sserts cimedacA ,llehstun eht nI .ylevitcepser 0.044 dna 0.04 , $0.044 = p$) egatnecrep raey

ecnahne ot demrof eb ot dedeen seigetarts setacidni siHT .stneduts etaudargrednu gnoma tnelaverp erew stibah na si ti ;sesruoc lanoisseforp ni ylniam ,stneduts eht fo sserts cimedaca eht etaivella dna stibah yduts yhtlaeh .deen tnegru

laicos ,pihsnoitaler lanosrepretni saw yduts eht fo sucof niam eht dna hcaeser a detcudnoc (2021) nauT a dah aidem laicoS dnuof rotagitsevni eht dna suotiuqibu dna stibah yduts ,selyts gninrael ,setis gnikrowten laicos fo tcapmi eht detagitsevni yduts siHT .syadawon sgnieb namuh fo tcepsa yreve no ecneulfni dnuoforp egelloc 125 fo latot A .level yraitret eht ta spihnsnoitaler lanosrepretni dna stibah yduts no setis gnikrowten .euqinhcet gnilpmas ecneinevnoc a hguorht nesohc erew ionaH ni seitisrevinu tneffid morf stneduts rof detpoda saw ngised yevrus evitpirsed a dna tneurtsni hcaeser eht rof desu saw ygolodohtem evitatitnauQ 0.84 tsael ta fo stneiciffeoc ytilibailer ahpla s'hcabnorC htiw seriannoitseauq dengised srehaeser eHT .yduts siht ,stset-t ,snaem ,segatnecrep ,seicneuqerf gnisu tuo deirrac saw atad eht fo sisylanA .yduts eht rof atad tcelloc ot gnisu fo level 'stneduts taht delaeever sgnidnif eHT .level ahpla 0.05 eht ta scitsitats noitalerroc nosraeP dna desaB .spihnsnoitaler lanosrepretni rieht dna stibah yduts rieht no ecneulfni evitagen a dah setis gnikrowten laicos ot nehW dna woh no stneduts ot nevig eb dluohs snoitatneiro raluger taht dednemmoer saw ti ,sgnidnif eht no htiw spihnsnoitaler lanosrepretni rieht gnivorpmi emit dneps ot ro stibah yduts rieht ecnahne ot aidem laicos esu .srehaet dna ,sdneirf ,seilimaf rieht

yduts eht fo sevitejbo

- :rednu sa era yduts siht fo sevitejbo niam eHT

1. level eht eguag ot smroftalp gninrael enilno dna secived latigid fo ytilibaliava dna ytilibissecca eht yduts oT .edivid latigid fo
2. .gninrael enilno fo edom wen eht ni gniyduts stneduts loohcs yradnoces roines fo stibah eht yduts oT

snoitseauq hcaeseR

eht liava dna ssecca ot elba stneduts lla erA ?stneduts lla ot elbaliava yllauqe gninrael-gnihcaet enilno si 1

?smroftalp gninrael enilno dna secived latigid

ot elba stneduts erA ?enilno fo edom wen eht ni srenrael eht yb decitcarp era stibah gninrael enilno tahW 2

?meht morf dednamed stibah gninrael rieht ni segnahc htiw epoc

yduts eht fo deen

stneduts loohcs yradnoces roines fo stibah gninrael enilno dna edivid latigid taht tuo dnif ot si yduts fo deen eHT ytilibissecca dna gninrael enilno gnikat elihw gnicafe era stneduts smelborp eht tahW .cimednap 19-divoc gnirud rieht htiw teem srehaet ,secived derahs ro secived nwo rieht evah yeht ,revoeroM .tenretni eht dna sretupmoc fo na etaerc ot si yduts eht fo deen eHT .sloot enilno tuoba egdelwonk fo kcal a osla si ereHT .ton ro sdeen esoht evlos ot redro ni tneveorpmi fo syaw dna edivid latigid dna stibah gninrael enilno fo gnidnatsrednu loohcs yradnoces roines fo noitacude woh tuo dnif ot si yduts siht fo ecnacingis eht ,erofereHT .smelborp .edivid latigid dna sessalc enilno yb detceffa era stibah gninrael enilno dna stneduts

erudecorp dna ygolodohtem hcaeseR

hcaeser yrevE .detagitsevni gnieb si melborp eht hcihw rof noitalupop elohw eht yduts ot tluciffid yrev si tl slauidividni fo rebmun llams ylevitaler a hcihw yb ssecorp eht si gnilpmaS .gnilpmas ot stroser ,erofereht ngised eht tuoba gnihtemos tuo dnif ot redro ni dezyлана dna detceles si stneve ro stcejbo ,slauidividni fo serusaem ro eht fo seitreporp eht lla sniatnoc elpmas detceles ylluferac eHT .detceles saw ti hcihw morf noitalupop eritne seitreporp eht fo seitreporp eht lla sniatnoc elpmas detceles ylluferac eHT .detceles saw ti hcihw morf noitalupop timrep ,ygrene dna emit ,sevas ,erutidneppe ecuder ot spleh tl .desiar neeb sah ti morf noitalupop eht fo .ycarucca dna noisicerp retaerg ecudorp ro epocs retaerg fo tnemusaem yduts eht fo elpmaS

ssalc fo stneduts 200 fo desirpmoc elpmas eHT .deyolpme saw euqinhcet gnilpmas modnar ,yduts tneserp eht ni .ylno sloohcs hragidnahC fo ^{ht}12 dna ^{ht}11

noitcelloc atad eht rof slooT

:atad eht tcelloc ot desu erew sloot gniwolof eHT

.rotagitsevni eht yb deraperp stibaH gninrael enilno fo eriannoitseauq A .1

.rotagitsevni eht yb edam edivid latigid no eriannoitseauq A .2

yduts eht fo ngiseD

.atad eht tcelloc ot deyoelpme saw dohtem yevrus evitpircesed nierehw erutan ni evitatitnauc si yduts tneserp ehT
 tneruc eht gninrecnoc noitamrofni esicerp dna tnenitrep niatbo ot dengised era seiduts hraeser evitpircesed
 .derevocsid stcaf eht morf snoisulcnoc lareneg dilav ward ot elbissop revenehw dna nonemonehp eht fo sutats
 .stibah gninrael enilno dna edivid latigid era yduts rednu selbairav ehT

sloot eht fo noitpircesed

rof rotagitsevni eht yb deraperp erew edivid latigid (ii) dna ;stibaH gninrael enilno (i) fo seriannoitseauq ehT
 .stneduts loohcs yradnoces roines

.smeti 9 sah B traP dna smeti 21 sah A traP – strap owt fo stisnoc stibaH gninrael enilno fo eriannoitseauq ehT
 enilno ssalc retfa/erofeb sah B traP dna stibah yduts gninrael noisses enilno gnirud ot detaler smeti sah A traP
 .stibah yduts gninrael

latigid fo ytilibissecca/ytilibaliava fo sniamod eht gnirevoc smeti 25 sah edivid latigid fo eriannoitseauq ehT
 .screuser enilno ot detaler segnellahc rehto dna ti gnitarepo fo ysae ;ecived

noitcelloc atad fo erudecorp

erew yduts eht ni deyoelpme sloot ehT .rotagitsevni eht yb enilno detcelloc saw yduts tneserp eht rof atad ehT
 ni detautis (etavirp eno dna tneimrevog eno) sloohcs owt fo stneduts loohcs 200 eht ot deretsinimda
 dnik erew htob dna atad tcelloc ot noissimrep rof detseuqer erew sloohcs eht fo slapicnirp ehT .hragidnahC
 .spuorg ppAstahW no tnes smrof elgooG hguorht atad tcelloc ot rotagitsevni eht wolla ot hguone
 fo sloohcs morf detceles stnedutS 200 ot yb deretsinimda erew edivid latigid dna stibah yduts gninrael enilno
 ht12 dna ht11 ssalc) stneduts loohcs yradnoces roines ekat ot saw yduts eht fo tnemeriuqer ehT .hragidnahC
 .(ylno

spuorg ppAstahW rieht ni smrof elgooG nevig erew stneduts ehT .noitcelloc atad hsinif ot syad 15 tuoba koot tl
 taht demrofni erew yehT .seriannoitseauq eht ni dekxa snoitseauq eht ot srewsna tsenoh evig ot desivda erew dna
 .laitnedifnoc dna terces tpek eb dluow sesnopser rieht

desu seuqinhcet lacitsitatS

retteb sti rof dna atad elohw eht fo erutcep evig ot deyoelpme neeb evah seuqinhcet lacitsitats evitpircesed ehT
 .atad fo sisylana rof deilppa saw euqinhcet dna erudecorp lacitsitats elbatus yduts siht ni dna noisneherpmoc
 eb lliw seuqinhcet lacitsitats gnivollof stluser eht etaluclac dna erapmoc ot dezyllana saw atad deniatbo ehT

- :deilppa

.segatnecrep ni atad fo noitatneserpeR .1

.dedeen reverehw atad fo noitatneserper lacihparG .2

noitaterpretni dna tluser

EDIVID LATIGID NO ERIANNOITSEUQ

| .oN .rS | SMETI | SEY (%) | ON (%) |
|---------|---|---------|--------|
| .1 | .sessalc enilno gnidnetta rof (telbat ro elibom ,potpal ,potkseD) ecived latigid a evah I | 95 | 5 |
| .2 | sessalc fo gninnigeb ecnis sessalc enilno eht dnetta ot elba uoy ereW | 89.5 | 10.5 |
| | ecived fo kcaL .a | 68.5 | 31.5 |
| | egakcaP tenretnI .b | 73 | 27 |
| | sessalc dnetta ot woh wonk ton did I .c | 52.5 | 47.5 |
| .3 | deworrob ro enoyna htiw derahs toN) sessalc enilno gnidnetta rof ecived nwo ym evah I (enoyna morf | 82 | 18 |
| .4 | .sessalc enilno dnetta ot ytivitcennoc tenretni elbats detpurretninu ot ssecca evah I | 89.5 | 10.5 |
| .5 | .sessalc enilno gnidnetta rof ylppus rewop detpurretninU | 84.5 | 15.5 |
| .6 | .sessalc enilno gnidnetta rof (.cte teeM elgooG ,mooZ) noitacilppa esu ylbatofrmoc nac I | 91 | 9 |
| .7 | ?knil ssalc enilno nepo ot woh wonk I | 61.5 | 38.5 |
| .8 | .sessalc enilno gnirud neercs ym erahs ot woh wonk I | 59 | 41 |
| .9 | .(moorssalC elgooG) noitacilppa enilno ni krow timbus ot woh wonk I | 71.5 | 28.5 |
| .10 | .sserts setaerc ti dna moorssalc elgooG tuoba egdelwonk ssel a evah I | 26 | 74 |
| .11 | .steehskrow tnirp ot emoh ta retnirp a evah I | 24.5 | 75.5 |

| | | | |
|-----|--|------|------|
| .12 | .ecived latigid ni evas dna epyt neht dna ,serutel ni seton hguor ekat I | 74.5 | 25.5 |
| .13 | .moorssalc elgooG morf lairetam gnisceca ni ytluciffid ecaf I | 47 | 53 |
| .14 | .noitatneserp gnirahs tuoba egdelwonk evah t'nod I | 54 | 46 |
| .15 | gnirud sessalc enilno gnidnetta elihw ycavirp dna ytefas ym tuoba denrecnoc ma I .cimednap | 71 | 29 |
| .16 | .tuo snur ylraluger nalp atad yM | 54 | 46 |
| .17 | .sessalc gnidnetta rof atad a evah I | 79.5 | 20.5 |
| | iF-iW .a | 50.5 | 49.5 |
| | topstoH .b | 55 | 45 |
| | ataD ralulleC .c | 66.5 | 33.5 |
| .18 | yb tnes (segami ,soediv ,segassem) lairetam/tnetnoc erom ot eud melborp egarots ecaf I .loohcs /rehcaet | 44 | 56 |
| .19 | (.cte sknil moorssalc ,snoitacifiton ,segassem ot eud) ylsuounitnoc debrutsid ma I | 47 | 53 |
| .20 | .pu dekcip gnieb si llac enohp ssalc gnirud nehW ,detcennocsid steg ssalc yM | 63 | 37 |
| .21 | .sgnah enohp emitemos esuaceb flesym etumnu ot elbanu ma I | 51 | 49 |
| .22 | .ylsuoentlumis enohporcim dna aremac no nrut ot elbanu ma I emitemoS | 60 | 40 |
| .23 | .ssalc gnirud raelc ro elbisiv ton si neercs derahs nehW detatirri leef I | 53 | 47 |
| .24 | .mac bew evah t'nod retupmoc lanosrep ym esuaceb aremac no nrut ot elbanu ma I | 47 | 53 |
| .25 | .emoh ta ecived latigid no sessalc enilno gnirud ecnerefretni edistuo ecaf I | 58 | 42 |

ssecca ot elba stneduts lla erA .stneduts lla ot elbaliava yllauqe gninrael-gnihcaet enilno rehtehw taht tuo dnif oT .smroftalp gninrael enilno dna secived latigid eht liava dna

- .stneduts lla ot elbaliava yllauqe ton si gninrael-gnihcaet enilnotaht raelc si ti ,stluser evoba eht morf .smroftalp gninrael enilno ro/dna secived latigid eht liava dna ssecca ot elba ton era stneduts lla
- t'nod ohw stnednopser %5 tuoba ot derapmoc sa ecived latigid evah (%95) stnednopser fo ytirojaM enilno gnidnetta rof telbat ro elibom ,potpal ,potksed evah emoS .sessalc dnetta ot ecived latigid evah .ecived yna ton evah emos tub sessalc
- emoh sA .gninrael enilno morf tifeneb & liava ot noitidnoc tneiciffus a ton si ecived fo ssecca erem tub esuaceb smroftalp gninrael enilno dna secived latigid eht liava dna ssecca ot elba ton erew stneduts ot woh tuoba egdelwonk ssel dah yeht secived evah ohw esoht elihw ;melborp laicnanif evah yeht .sessalc enilno dnetta
- tneuerf fo melborp secaf osla dna atad ralullec hguorht sessalc enilno dnetta stneduts eht fo tsoM ,revoeroM .sessalc enilno dnetta ot ylppus rewop dna ytivitecennoc tenretni elbatsnu ro noitpurretni .steehskrow tnirp ot retnirp evah t'nod dna ,moorssalC elgooG tuoba egdelwonk ssel evah stneduts .stneduts gnoma sserts setaerc ti dna ylraluger tuo snur tub atad evah ohw stneduts esohT
- emoh ta ecived latigid no sessalc enilno gnirud ecnerefretni edistuo decaf stnednopser 200 fo tuo %58 .ecnerefretni edistuo ecaf ton did % 42 saerehw

stibaH gninraeL enilno no eriannoitseuQ

B TRAP

| .rS .oN | METI | seY (%) | (%) oN |
|---------|---|---------|--------|
| .1 | ssalc eritne dnetta uoy od ,no si ssalc eht nehW | 89 | 11 |
| .2 | ?ylluferac rehcaet ruoy ot netsil uoy oD | 95 | 5 |
| .3 | ?rehcaet ruoy yb uoy ot nwohs soediv hctaw uoy oD | 89.5 | 10.5 |
| .4 | gnirud (.cte/snoitcurtsni/srewsna snoitseuq/snoitinfid/sdrow wen) seton ekam uoy oD ?ssalc | 85.5 | 14.5 |
| .5 | ?noissucsid ssalc ni etapicitrap uoy oD | 87 | 13 |
| .6 | ?tbuod ni era uoy nehW rehcaet ruoy morf snoitseuq ksa uoy oD | 89 | 11 |
| .7 | ?cimednap gnirud ssalc dnetta ot ecalp reporp a evah uoy oD | 81.5 | 18.5 |

| | | | |
|-------------|--|------|------|
| .8 | ?sessalc enilno gnidnetta rof tmemegnarra gnittis reporp a evah uoy oD | 81 | 19 |
| .9 | ?aremac eht no nrut uoy od ,aremac ruoy no nrut ot syas rehcaet nehW | 83 | 17 |
| .10 | ?od ot uoy ksa srehaet nehW enohporcim ruoy no nrut uoy oD | 86.5 | 13.5 |
| .11 | ?uoy ot elbidua ton si eciov s'rehcaet nehW ,taeper ot rehcaet ruoy ksa uoy oD | 87.5 | 12.5 |
| .12 | -.yllautca od uoy tahw ,strats ssalc nehW a. ylevitnetta/yletelpmoc dnetta & sessalc enilno nioJ | 84 | 16 |
| | ylreporp dnetta t'nod tub ni-goL .b | 45.5 | 54.5 |
| | ro enizagam daer/cisuM/aidem laicos /VT gnihctaw) esle gnihtemos od tub ni-goL .c (.cte koobyrots | 60.5 | 39.5 |
| | krow dlohesuoh ni pleh tub nioJ .d | 59.5 | 40.5 |
| | no era sessalc elihw sdneirf/ylimaf htiw pissog tub nioJ .e | 59.5 | 40.5 |
| | seitilicaf fo kcal fo esuaceb ylraluger nioj tonnaC .f | 68.5 | 31.5 |
| .13 | ?cimednap gnirud sessalc eht neewteb tae uoy oD | 54 | 46 |
| .14 | ?sessalc enilno gnirud rehcaet htiw tcaretni uoy oD | 55 | 45 |
| .15 | ?ylerecnis yrev seton nwod ekat uoy ,gnihcaet moorssalc eht gniruD | 91.5 | 8.5 |
| .16 | ?emit no ylraluger sessalc ruoy dnetta uoy oD | 89 | 11 |
| .17 | ?ssalc gnirud srehaet ruoy morf tibah yduts reporp tuoba ecnadiug teg uoy oD | 84 | 16 |
| .18 | ?retal yltaen dna ylluf erom tuo meht ypoc neht dna ,serutcel ni seton hguor ekat uoy oD | 80.5 | 19.5 |
| .19 | ?ssalc gnirud nekopstuo uoy erA | 64 | 36 |
| .20 | ?gniyas si rehcaet eht tahw no llew sucof uoy oD | 90 | 10 |
| .21 | ?krow puorg ni etapicitrap ylevitcaorp uoy oD | 87 | 13 |
| .22 | ?sessalc retfa yduts fles rof elbat emit/eludehcs yna deraperp uoy evaH | 86.5 | 13.5 |
| .23 | ?sessalc retfa yduts flesruoy rof elbat emit/eludehcs eht wollof uoy oD | 82.5 | 17.5 |
| .24 | ?cimednap gnirud yduts-fles no dneps uoy oD | 92.5 | 7.5 |
| .25 | ruoy ot detaler ro suballys morf cipot yna/a dnatsrednu t'nod uoy nehW od uoy dluow tahW ?seiduts | | |
| | a. ssalc gnirud rehcaet ksA | 64 | 36 |
| | b. gnirotut etavirp a ta srotut ksA | 65.5 | 34.5 |
| | c. sdneirf ksA | 82 | 18 |
| | d. stnerap ksA | 75 | 25 |
| | e. nwo ym no skoob ecnerefer morf hcraeseR | 87 | 13 |
| | f. enilno hcraeseR | 87.5 | 12.5 |
| | g. flesruoy yb erolpxE | 61.5 | 38.5 |
| h. ti evaeL | 63 | 37 | |
| .26 | ?emit no krow ruoy timbus uoy oD | 61.5 | 38.5 |
| .27 | ?sessalc retfa uoy ot nevig steehskrow ecitcarp uoy oD | 70.5 | 29.5 |
| .28 | ?skoob txet eht morf seton eht htiw seton ssalc ruoy erapmoc uoy oD | 58.5 | 41.5 |
| .29 | tuoba) loohes/srehaet yb tnes snoitacifiton kcehc uoy oD ?(.cte ,setad noissimbus/tmemngissa/tset/sessalc | 81 | 19 |
| .30 | ?edisgnola VT htaw/cisum ot netsil ot referp uoy od (gniyduts -fles) gniyduts elihW | 68 | 32 |

elba stneduts erA ?enilno fo edom wen eht ni srenrael eht yb decitcarp era stibah gninrael enilno taht tuo dnif oT
?meht morf dednamed stibah gninrael rieht ni segnahc htiw epoc ot

%89 .ylluferac yrev rehcaet eht ot netsil ,ssalc dnetta stneduts Ila taht raelc si ti ,stluser evoba eht morf tuo stnednopser %89 dna ,ylreporp rehcaet rieht ot netsil %95 .ton % 11 sa erehw ssalc eritne dnetta stnednopser sessalc gnidnetta elihw seton ekam %85.5 .rehcaet rieht yb meht ot nwohs soediv hctaw stnednopser 200 fo deyebo stnednopser flah naht eroM .tis ot ecalp reporp dah ,snoitseauq ksa ,detapicitrap %87 .cimednap gnirud stcaretni dna sisab raluger no ssalc denioj stnedutS .stbuod deraelc dna aremac ,enohporcim no denrut ,rehcaet rof elbat emit deludehcs /deraperp dah stnedutS .krow puorg ni devlovni ylevitca ,llew desucof ,rehcaet eht htiw dna nosrep tnetepmoc erom eht morf stbuod rieht sraelc stnedutS Ila .cimednap gnirud sessalc retfa yduts-fles rieht timbus dna cimednap gnirud skoob ecnerefer morf hcraeser ,enilno hcraeser ,sevlesmeht yb derolpxe osla ,segassem dekcehc ylevitca stnednopser 200 latot fo tuo stnednopser %81 .steehskrow ecitcarp ,emit ni krow od ot gnirreferp ton ,ylno yduts no etartnecnoc stneduts Ila ,tsael eht ton tub tsal .cte loohcs yb snoitacifiton .seitvitca rehto

SNOISULCNOOC

dna 19 divoc cimednap labolg fo kaerbtuo suoires eht ot eud enitnarauc no si dlrow eht fo trap rojam ehT .noitutitsni lanoitacude Ila ni nees eb nac stceffe sti dna seitic motnahp otni denrut evah seitic ynam erofereht anoroc eht ytissecen a si ti ,noitpo erom on si gninrael enilno .elor tnacifingis a sayalp gninrael gnihcaet enilno .edom enilno ot edom enilffo morf ot og ot snoitutitsni edam sah suriv

Ila ot elbaliava yllauqe ton si gninrael-gnihcaet enilnotaht noisulcnoc ta dehcaer rotagitsevni eht ,llehstun a nI evah stnednopser eht fo tsom fo stnednopser taht si tluser ehT .edivid latigid fo txehtoc eht ni stnednopser 200 .cimednap gnirud elor lufrednow a sayalp loohcs .evah t'nod emos tub sessalc enilno dnetta ot ecived latigid ,ylppus rewop detpurretni ,elpmaxe rof .srenrael s'tnednopser fo yaw eht ni ereht osla era segnellahc emoS enilno si gniht doog ehT .cte sgnah enohp ,tmetnoc erom ot eud melborp egarotS ,ytivitcennoc tenretni elbatsnu srehaet eht ot ylluferac netsil dna strats ti nehwsalac eritne eht dnetta stnednopser eht fo tsom taht ,gninrael latigid evah koob ecnerefer morf hcraes ,sdneirf ,stnerap dekka ,nosrep tnetepmoc eht morf stbuod sraelc dna .cimednap gnirud srenrael rof noob a si ygolohceT .sessalc enilno dnetta ot ecived

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