

Emerging digital domains for Native North American languages



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University of Hawai'i at Mānoa / Alaska Native Language Archive



Jan 9, 2016
Washington, DC



Goals

- Distinguish two types of digital language domains
 - primary communities (*in* the language)
 - secondary communities (*about* the language)
- Provide some examples of each type of digital language community
- Discuss prospects for Native American language maintenance in an increasingly digital world

Digital Language Communities

- primary communities
 - language is performed digitally
 - embedded in the digital domain
 - supports raising children as “digital natives”
 - necessary to avoid “digital language death” (Kornai 2013)
- secondary communities
 - digitally-mediated domains for language use
 - digital versions of what Golla (2001) called “secondary language communities”
 - largely free of evaluative filters and linguistic purism which have impeded the success of traditional language programs

Primary digital communities

- operating system support
- spell checkers
- automated speech recognition (ASR)
- web-based content (e.g., Wikipedia)

Operating system support

- Interaction between humans and digital devices is mediated by an operating system (OS)
- Worldwide, only 16 languages are “thriving” at the level of OS support (Kornai 2013)
- None of these 16 are Native North American languages

Mac OS 10.11 El Capitan

- full support for 30 (+3) languages
- limited support for 262 languages, including
 - Unangam Tunuu (Aleut, ale)
 - Hinóno'etíít (Arapaho, arp)
 - ᄎᄅᄂ ᄆᄋᄂᄎᄎᄎᄎᄎ (Cherokee, chr)
 - Tséhésenéstsetò (Cheyenne, chy)
 - Mvskoke (Creek, mus)
 - ᐃᓄᐅᐁᓄᓄᓄᓄᓄᓄᓄᓄ (Inuktitut, ike)
 - Kalaallisut (Greenlandic, kal)
 - Lakǎól'iyapi (Lakota, lkt)
 - Míkmawísimk (Micmac, mic)
 - Kanien'kéha (Mohawk, moh)
 - Diné Bizaad (Navajo, nav)
 - Shiwi'ma (Zuni, zun).





Calendars



6

Day

Week

Month

Year

Search

ᠳᠤᠴᠢᠷᠢ 21, 2015

ᠠᠭᠤᠯᠠᠳᠤ

all-day

8 am

9 am

10 am

11 am

Noon

1 pm

2 pm

3 pm

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5 pm

6 pm

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8 pm

9 pm

< Today >

M	T	W	T	F	S	S
28	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
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2	3	4	5	6	7	8

No Event Selected



Language & Region



Language & Region preferences control the language you see in menus and dialogs, and the formats of dates, times, and currencies.

Preferred languages:

- Diné bizaad**
Navajo — Primary
- English**
English



Region:

First day of week:

Calendar:

Time format: 24-Hour Time

Monday, January 5, 2015 at 7:08:09 AM HST
1/5/15, 7:08 AM 1234.56 \$ 4567.89

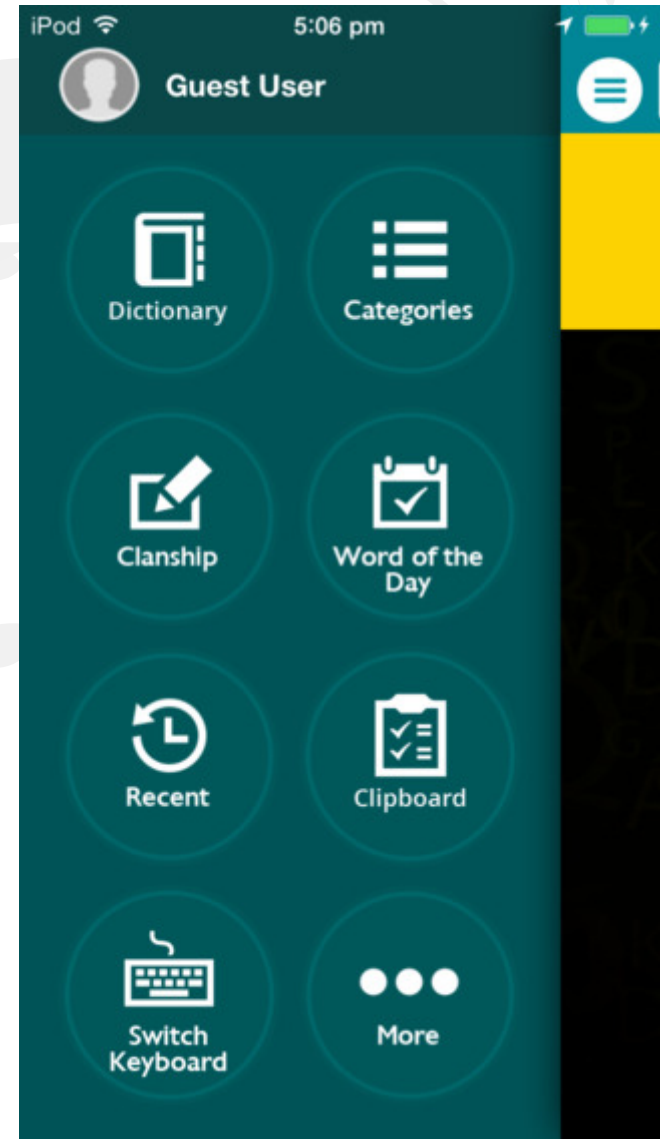
[Keyboard Preferences...](#)

[Advanced...](#)



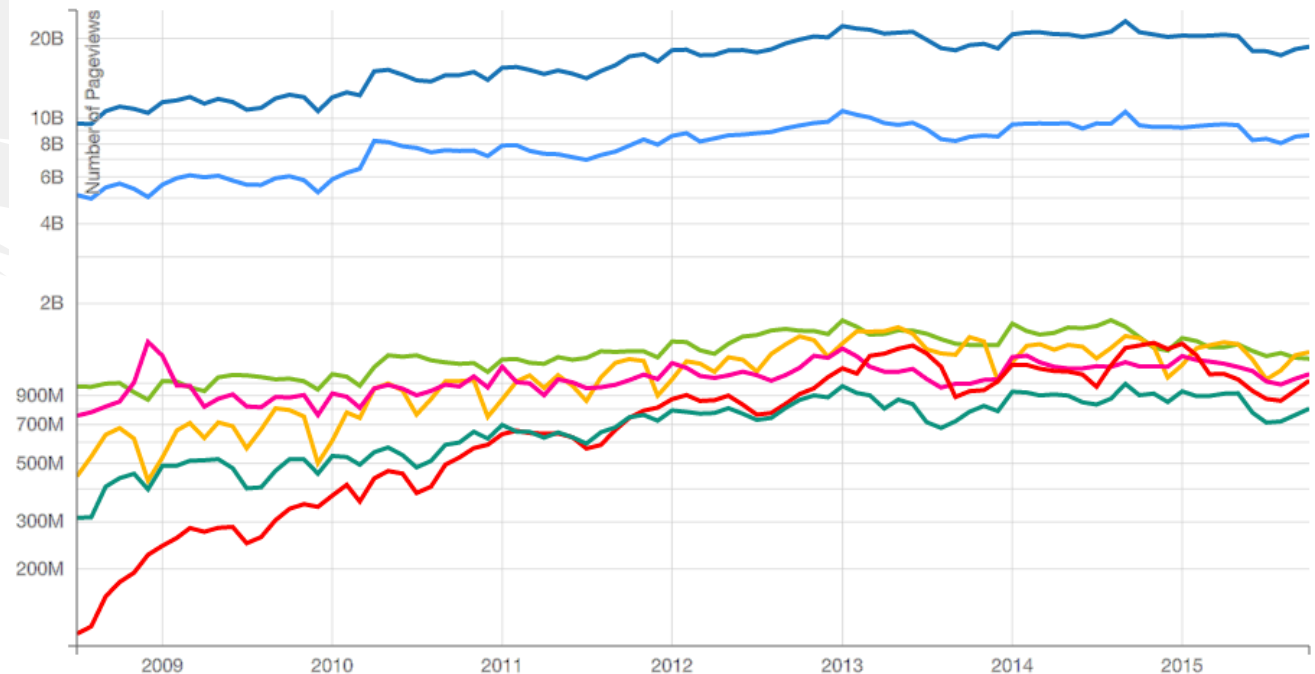
Apple iOS 9

- built-in support for 46 languages
- ability for developers to support any language via the ISO 639-3 code
- largely ignored by developers of apps for Native American languages



Wikipedia

- 289 languages
- 340 additional at the “incubator” stage (at least 5 active editors)



W Window Rock, Arizona - W x

https://en.wikipedia.org/wiki/Window_Rock,_Arizona

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WIKIPEDIA
The Free Encyclopedia

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Languages

Català
Deutsch
Diné bizaad
Español
Français
Hrvatski
Italiano
Nederlands
नेपाल भाषा
Нохчийн

Window Rock, Arizona

From Wikipedia, the free encyclopedia

Coordinates: 35°40′22″N 109°3′44″W﻿ / ﻿﻿ / ﻿

Window Rock (Navajo: Tségháhoodzáni) is a small city that serves as the seat of government and capital of the Navajo Nation, the largest territory of a sovereign Native American nation in North America. It lies within the boundaries of the St. Michaels Chapter, adjacent to the Arizona and New Mexico state line. Window Rock hosts the Navajo Nation governmental campus which contains the Navajo Nation Council, Navajo Nation Supreme Court, the offices of the Navajo Nation President and Vice President, and many Navajo government buildings.

Window Rock's population was 2,712 at the 2010 census,^[1] but is estimated to reach around 20,000 during weekdays when tribal offices are open. Window Rock's main attraction is the window formation of sandstone the community is named after. The Navajo Nation Museum & Library, the Navajo Nation Zoological and Botanical Park as well as the Navajo Nation Code Talkers World War II memorial are located in Window Rock.

Contents [hide]

- Origin of name
- Government
- Geography
- Features
- Demographics
- Education
- Travel and tourism
 - Navajo Nation Museum
 - Navajo Nation Zoological and Botanical Park
 - Ch'ih'ootso Indian Market Place
- Infrastructure
 - Transportation
 - Business
- Culture
- Health care
- See also
- References

W Tségháhoodzáni - Wikibííłiı̄a x

https://nv.wikipedia.org/wiki/Tségháhoodzáni

Create account Log in

naaltsoos **baa yáshtí' nisin** yiníshita' **lahgo áshlééh** hanishtá

WIKIBÍÍLIYA
Inshóobíłiı̄a Tsáadoo ni kóobásh

łiyisíł naaltsoos
Wikibííłiı̄a yee hadít' éhígíí
saad baa áháyáąjí
"naaltsoos nishónígó ádaalyaaígíí"
áníłdíł lahgo ádaalyaaígíí
ahíł' na'íłta'

aná'áłwo'

T'AN (FAQ)
dahwéet'aahígíí
system check
Wikibííłiı̄a beehaz'áąnił

na'ídikídish?
áłah ná'ádleehdi
nihich'í' yáníłti'
Wikibííłiı̄a bá béeso
fa' íshnił nisin

Print/export
Create a book
Download as PDF
"print" áshlééh nisin

bee na'anishí
yíts'ádaanít'í díł
naaltsoos baa atíingíí
atlkéé' daasdoh
díł kwe'é naaltsoos baa
atíiní (lahgo
ádaalyaaígíí)

Tségháhoodzáni

Tségháhoodzáni éł Naabeehó bikéyah bikáa'di oo'hoolyé; Hoozdoh Hahoodzo biyí'di ahoolyé.

Tségháhoodzáni éł 13.4 tsinsítá dik'áągo hahoodzo,^[1] áádoó áadi diné 2,712 kéédahat'j (2010 yéęęąą' diné daaltá). Tségháhoodzáni éł 35°40′22″N 109°3′44″W﻿ / ﻿﻿ / ﻿di bíłhaz'áą. Tségháhoodzáni éł 6,830 adées'eez ąnzáadi (kéyah bineel'ąqhígí).

Tségháhoodzáni éł ńta naakigo siniil: Window Rock Elementary School dóó Window Rock High School.

Béesh baę dah sí'áni (Naabeehó biWááshindoon) ya'anájaa'gi bikił éł Tségháhoodzániłdi sí'ą.

Diné Bizaad yee Nidaazbaa'ígíí bee ééhaniłh biniiyé ályaaígíí éł Tségháhoodzániłdi sí'ą; náána Diné Bikéyah binaaldeehii dóó ch'íł daníł'íniłdi áadi bit hazá áłdó'.

Tségháhoodzáni *
Aashij bił'tó hahoodzo
Dibé nisa hahoodzo
Hoozdoh hahoodzo
Yooto hahoodzo

● Kin dah shijaa'ígíí ● Naalyéhé bá Hooghan

Diné bikéyah be'elyaaígíí

Tségháhoodzáni éelkid

Béesh baę dah sí'áni ya'anájaa'gi bikił éelkid



Wp/akz/Adams, Massachusetts

Wp > akz > Adams, Massachusetts
< Wp | akz

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- In other languages
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- Suomi
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- Polski
- Svenska
- Volapük



K*ää faoola.

Adams, Massachusetts ooli oola aadipärtmänti Massachusät (aarichón 4*ääáa) aaihaani Posno choba ihaanosi. Oktaali ooli sobayhíkko km². Láhwa oola faoola ooli Adams, Massachusetts. I'oola ooli oolasábachani naani. Akki imiyiihöosi ooli onka apiisa aaachakki aalokbaha fa2008. Innaa4iilka ooli Tatkinnaa4iilka.



Ätta faoola.

Categories: Wp/akz | Wp/akz/Oola aamassachusät

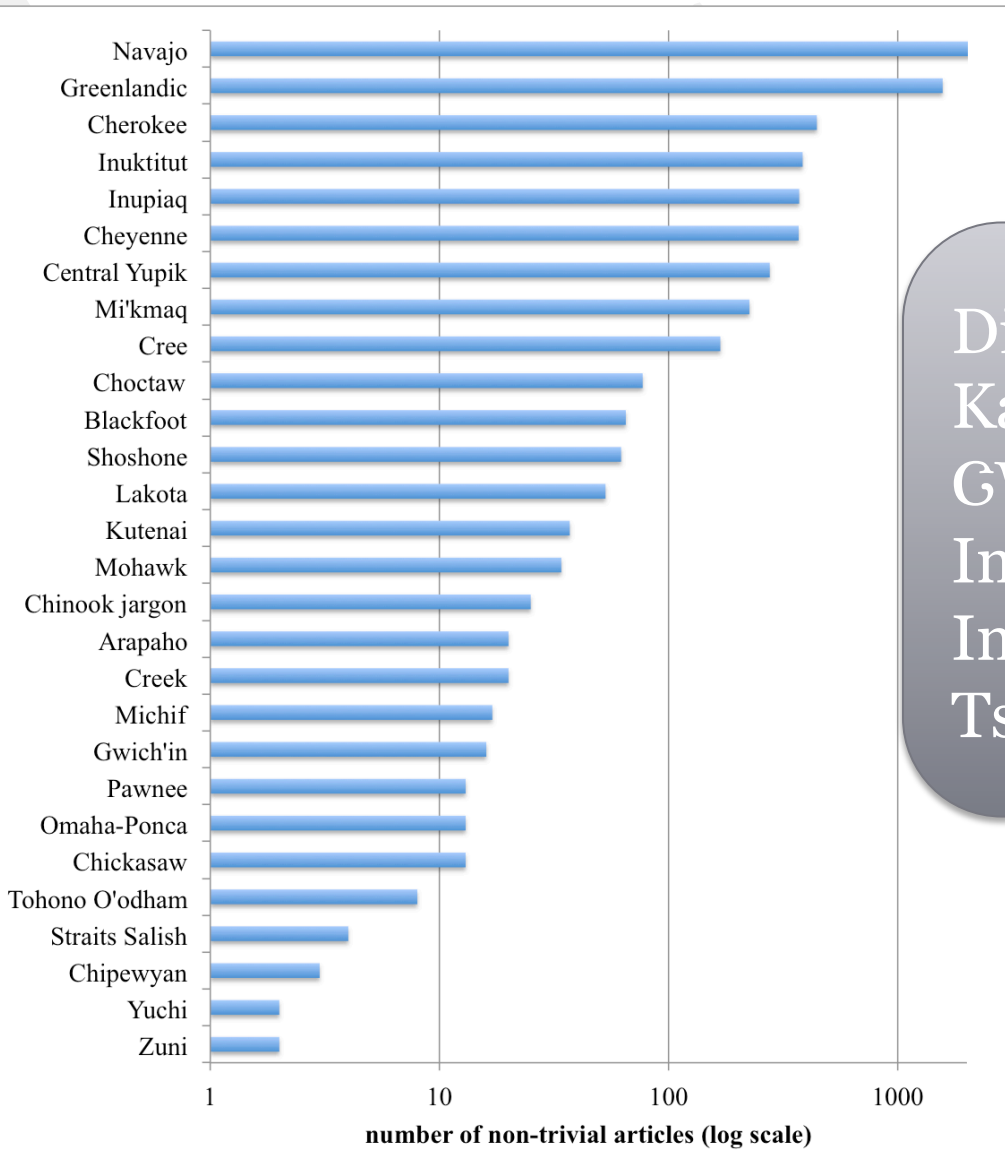
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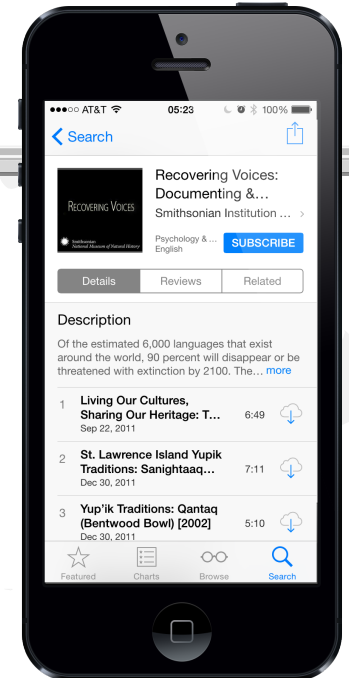
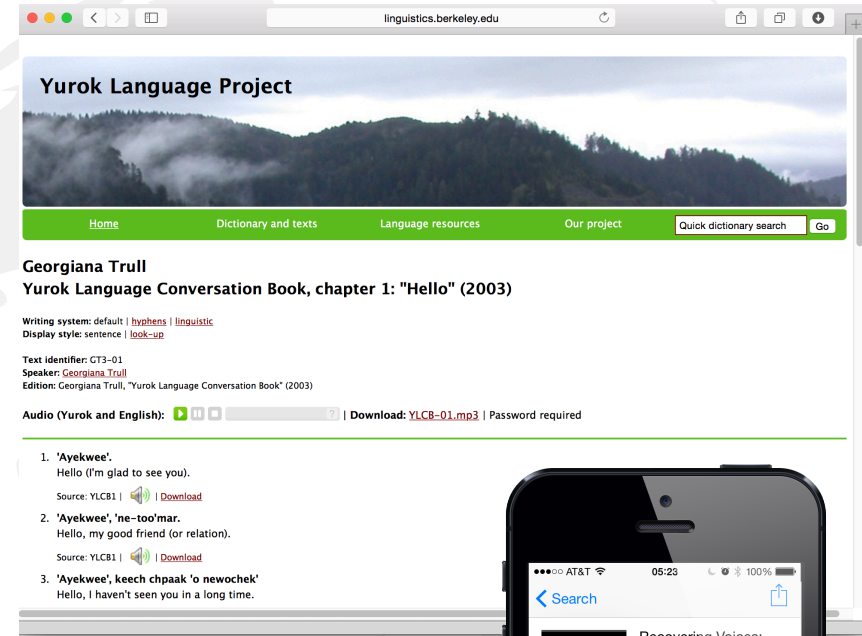
Native language Wikipedias



Diné Bizaad	2369
Kalaallisut	1568
GWY ᏍᏅᏍᏁᏍᏉ	443
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Secondary communities

- websites / web presence
 - static
 - portal
 - interactive
- mobile apps
- games
- social network sites



[Home](#) > [About](#) > The Salish Language

THE SALISH LANGUAGE

Our Salish language is a dialect of Interior Salish, and while it is related to others in the language family, it is unique in many ways. The Salish family has no known relation to any other language family.

For information about our language program, please contact us at:

6212 Agency Loop
Wellpinit, WA 99040

(509) 258-4315

Language Program Manager
marshaw@spokanetribe.com

Language Programmer
donrayg@spokanetribe.com

gwichin.ca



Gwich'in Nat Gè'tr'oonahntan Ginjih Geenjit Gihk'àtr'aanjih GSCI

Kaik'it Goozri'
Gwank'oo
K'atr'mahtu K'it
Edineht'eh
Tr'agwàltsan
Khas Tat Gwandák
Ànts'at
Diyàh goondák
Kánohtu Eenjit
Tr'oochit ts'at



Gwich'in Nat

Nan k'it dinithàt'oo jidi nan sridatr'igwijiinlik eenjit. Dàgwidd'è' K'yùu ts'at Jaa Akòo T'àgidi'in

Zhik nànkak North America gwizhit Gwich'in lidlìi ts'at khainjii d'haii gwà'an tr'iniili, chuuvèe ts'liivi d' nà'a'ii gwits'at gwà'an gwidich'in. Eneekaii kat gwizrih nekhwindò haii t'àngiinçh'uu ak'oh nànkak gwà'an. Zhehk'oo gwoinçhii gwats'at gwich'in lidlìi, aii t'at Athapaskans nakhwir'ahnùu, jii gwizhit nlii kat Aachin kat, Aaii Chik kat, Han Gwich'in kat, ts'at Dachantat Gwich'in Kat, gwàt nakhwiginjik ts'at yeenoo nits'òo tr'agwiindai' gwiintà'òh ihàak gwizrih goonlih.

Vàh nan gòodlit kat gootr'inah'in dà'i, **gwich'in zhehk'oo vanchòh nàk'oh zhàk dhitin ànyànch'uu** (uunjit k'yùu gwizrih geenjit gwizhit gwidinihàt'oo) gwiinli' jii t'at y'eedi' Alaska antà'it ts'at Yukon gwijnl' akòots'at zhik gweedi' Nagwichoönjik gwijnjik gwits'at tthak tr'igweech'in'. Jik at'at zhik Northwest Territories gwizhit tr'igwindlìi, kaiik'it daang Teetà'it Zheh, Tsiigèhtshik, Aklavik ts'at Inuvik gitr'ahnùu gwizhit. Khainjii 2500 Gwich'in t'inyànch'uu tr'iniili. Yukon ts'at Alaska gwidi' nakhwàh gwich'in kat th'aih hee nihkhee natr'ahdadal ts'at nihkhàh gàht'r'idandàii, aii kaiik'it gwizhit tthak t'at ihàok jùtin ts'at ihàogwinl' gwèdlìi gwizhit 5,000 **ànyànch'uu kat tr'iniili** (uunjit k'yùu gwizrih geenjit gwizhit gwidinihàt'oo).

Yeenoo tr'agwiindai' gwik'it, nakhwanànkak yeenj' chuu tà'it ddhat gwà'an ts'at Tsiigèhnjik chuu tà'it gwà'an gwats'at ch'eenoo Ehdit'at gwits'at tthak, yeenln Sruh Choo Njik gi'ta'ak ts'at aii ts'at yaa'at ddhat tat ne'e'ak ts'at aii gwits'at tthak. Zhehk'oo gwoinliit th'aih hee shint ts'at khaii dà'i dachantat gwà'an zheh tr'igwidi'in diikaik'it geh'ok danh. Tih'aih hee leii kat natr'aazrii, àuk kaatr'idi'in, ts'at khväh t'atr'ah'ii t'at goolàt kat tr'idi'in, gwik'lighe' yeenoo gwik'it vádzaih, dñjik ts'at àuk zheii t'at shih tr'aa'ih.



Nagwididhat 1996 dà'i Teetà'it Gwich'in Kaiik'it Goozri' Gihk'àtr'aanjii eenjit Walter Alexie zrit diir'ii' choo nahahàak t'at Teetà'it Gwijnjik nji'. Ingrid Kritsch vagwank'òo gòotà'atr'achùh, GSCI eenjit.



Chuu Tr'adaodich'uu gwà'an Eunice Mitchell zrit tr'inùuhah dà'i àyüh ch'òh ahtsìi. Ingrid Kritsch vagwank'òo gòotà'atr'achùh, GSCI eenjit.

plateauportal.wsulibs.wsu.edu

Plateau Peoples' Web Portal

Advanced Search
Login | Register

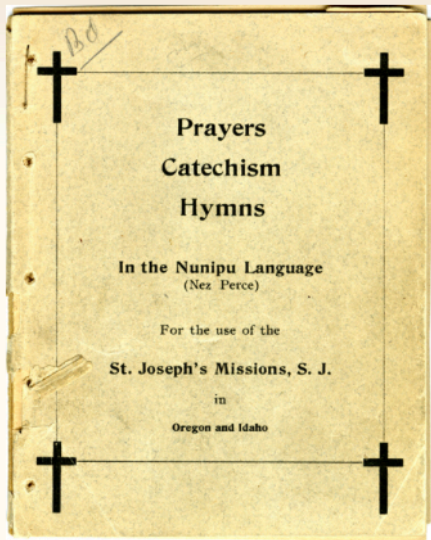
Home Browse Tribal Paths Public Collections My Collections

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Language Nimipu

Prayers Catechism Hymns (page 1)

View Larger Image



**Prayers
Catechism
Hymns**

In the Nunipu Language
(Nez Perce)

For the use of the
St. Joseph's Missions, S. J.

in
Oregon and Idaho

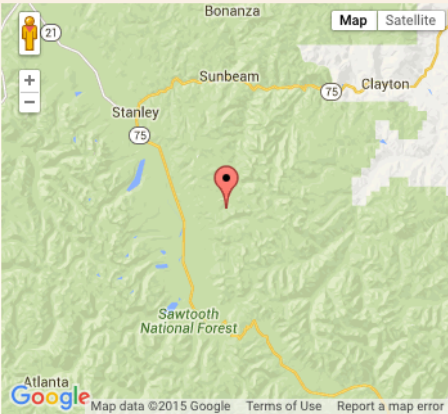
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Narrative

Related Items

Map



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Location description

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- Tribal Catalogue Record
- Catalogue Record
- Tribal Knowledge
- People
- Categories, Tribal Paths, and Restrictions

Report Offense or Deceased

Dane Wajich Contes et chants Dane-zaa : les Rêveurs et leur terre



À PROPOS DU PROJET

UN TAMBOUR
DE RÊVEUR

LIEUX

LES RÊVEURS ET
LEUR TERRE

CONTES ET CHANTS

RESSOURCES

À propos des contes Dane-zaa | Contes | À propos des chants Dane-zaa | Chants

Contes et chants | CONTES DANE-ZAA



00:00

Tóch'edóh Dane-zaa ʝo laa náájich.

Autrefois, les Dane-zaa se réunissaient ici.

00:06

ʝo guu adáástl'uk lhójjigé ʝalaa,

Ces plateaux se succédaient

00:10

gwe adáástl'uk taachii lhójjigé ʝalaa.

Il y a trois plateaux l'un après l'autre.

00:15

ʝo dane enénáejich.

Les gens se réunissaient juste ici.

PAUSED

0:00:08.116



Billy Attachie, parlant du Rêveur Nááchjji/Oker, 2005.

Description:

Billy Attachie parle du Rêveur Nááchjji (Oker) qui a vécu et est mort à Alááʔ ʝatq (Petersen's Crossing). Alááʔ ʝatq, 2005. Catalogue # DZVMCDVCAM-6-29-05-2&3of4.

[Téléchargez la transcription \[PDF\]](#)



eyakpeople.com



Week 6 X Marks the Spot



k'udzuudah!

You've earned
more
BERRIES!



to perfect those sounds



Open "www.eyakpeople.com/daxuhnyuga/level-one-week-six-learn-10" in a new tab

Social network sites

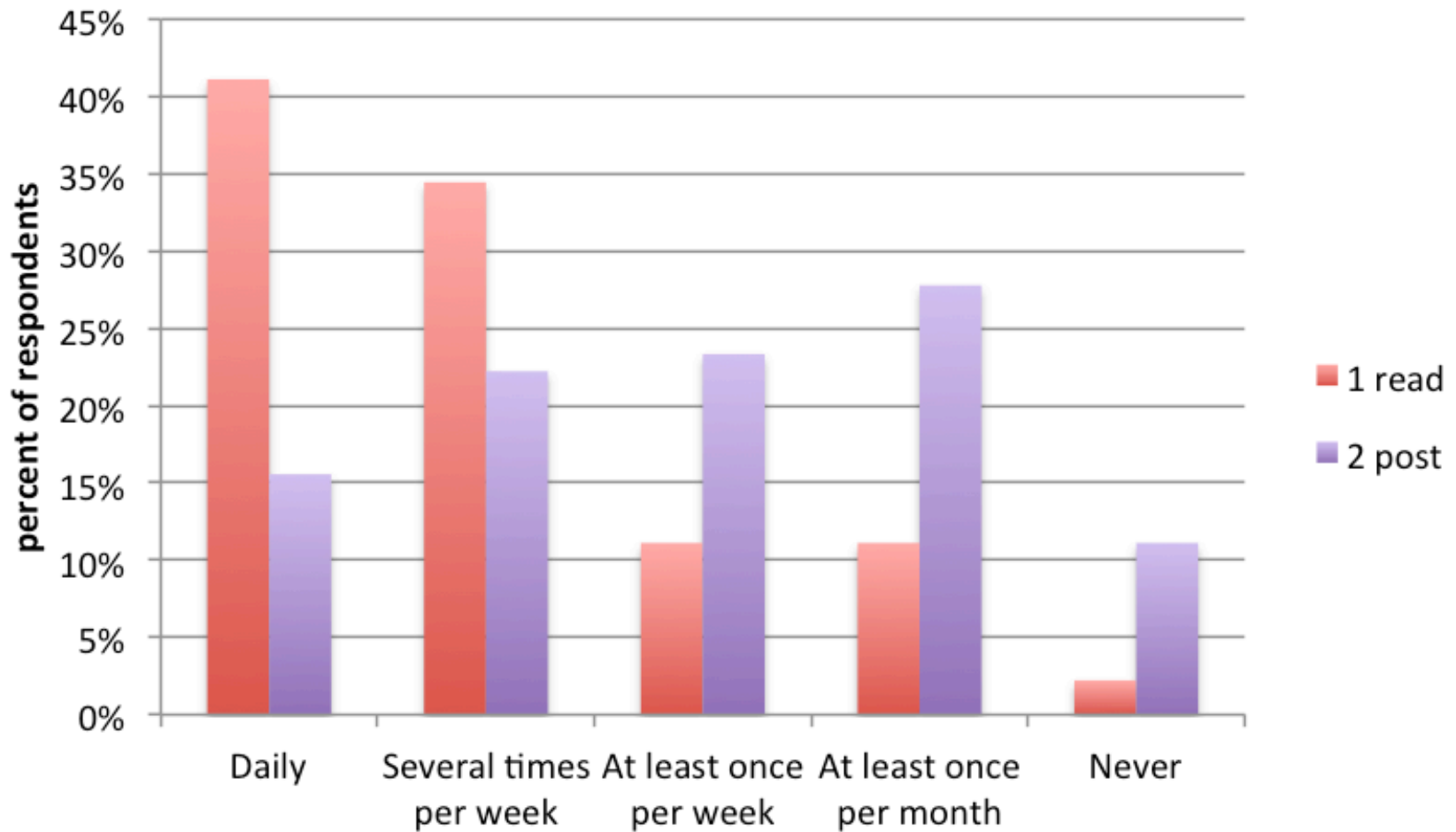


- asynchronous, though in practice interaction takes place in a near-synchronous manner
- occupy a space between synchronous face-to-face conversation and asynchronous written communication
- largely free of purism and evaluative filters which can plague language revitalization programs
- users more willing to explore and experiment
- nearly every Native American language has at least one Facebook group

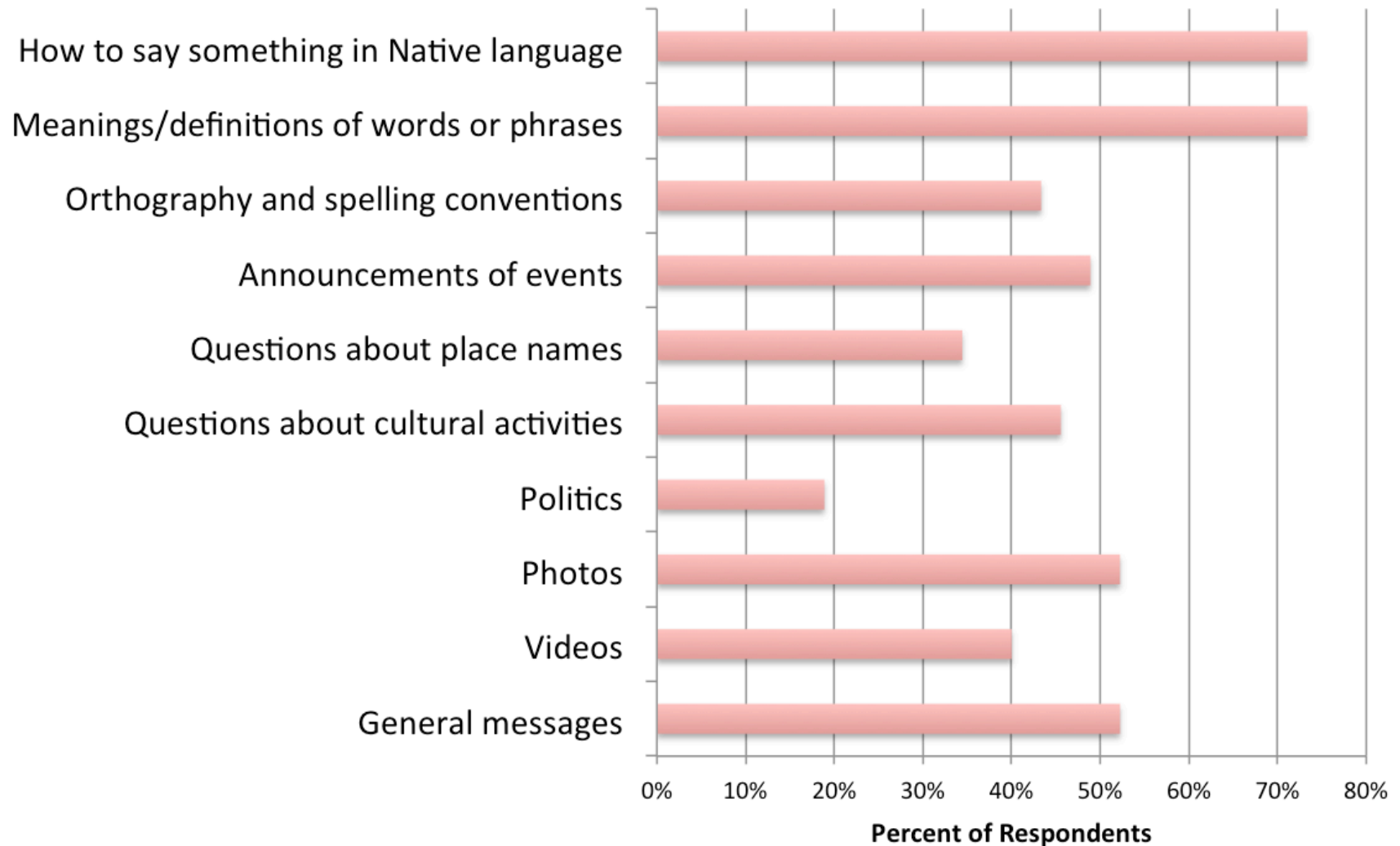
Native language use on Facebook

> 50% post at least once per week

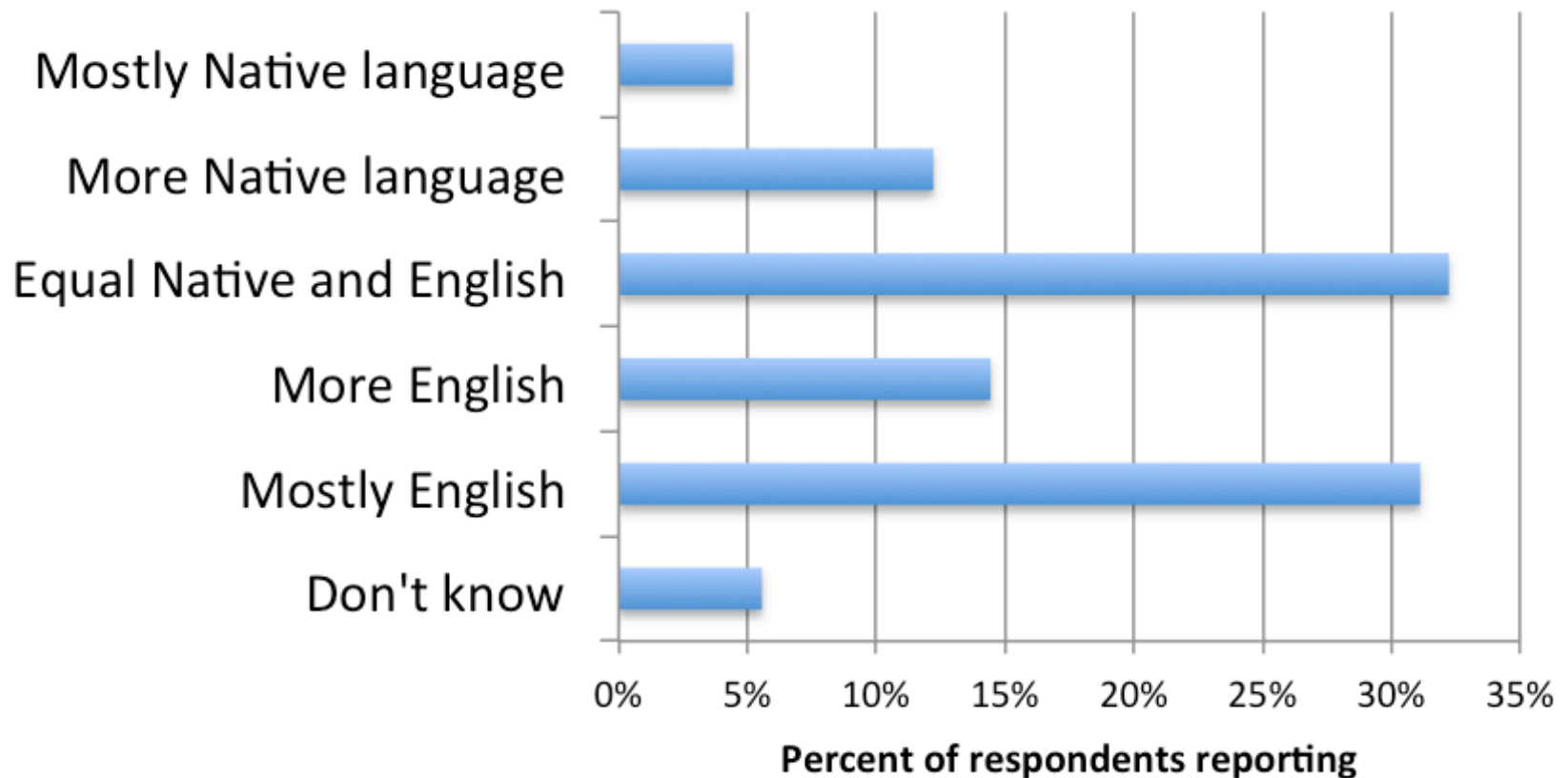
> 40% of read Native language daily



Most conversations about meanings and how to express something in Native language



Social media provides a venue for language use





[Redacted name]

October 20 at 12:42pm



How do you say "hunter" in Gwich'in?

Like

Comment

Share



[Redacted name]

naazhrii naji – hunters

nalzhrii – I hunt

Like · Reply · 3 · October 20 at 1:39pm

Drin gwiinzii 😊

I'm looking for a translation for "never give up" I've come up with "ekhè' guudòonuh srò' " Any suggestions would be greatly appreciated. Mahsi' 😊

October 5 at 7:11 am

Vanh gwiinzii shilak kat. I would like to know how you say green in Dinjii Zhuh. Growing up, I've always heard jidii dat'oo, this is also the Dinjii Zhuh pronunciation for blue. I now see that green has been changed to jidii at'oo (gallbladder - at'oo'). I will always say green the way I heard it growing up and I don't think it should be changed. Your thoughts on this would be greatly appreciated. Hai' choo 😊

Like

Comment

Share

4 people like this.

Personally I don't think words should be changed in any language, stay true to the history and heritage!

Like · Reply · 1 · October 5 at 8:33am

Yes, I agree.

Like · Reply · 1 · October 5 at 8:36am

Gwinnzii tsat ginihee.

[See Translation](#)

Like · Reply · 1 · October 5 at 11:51am

It should stay the same

Like · Reply · 1 · October 5 at 11:53am

Alaska nàhkat dats'an t'oo gwinyàa.

Like · Reply · 4 · October 12 at 11:18am

Hai' choo 😊

Like · Reply · October 15 at 1:22pm

Same zhuu.

Like · Reply · October 16 at 9:03am



Prospects

Technology was once anathema

“Although cyber-space can be put to use for [reversing language shift] purposes, neither computer programs, e-mail, search engines, the web as a whole, chat boxes or anything directly related to any or all of them can substitute for face-to-face interaction with *real family imbedded in real community.*”

(Fishman 1991, emphasis original)

Technology has become essential

- Digital communities are now no less “real” than face-to-face communities
- Granted, there is no “technical fix” which can by itself lead to continued language survival (Dauenhauer and Dauenhauer 1998)
- However, without digital technologies Native American languages cannot continue to play a role as communicative systems

But to what end?

- Secondary digital language communities not only emerging but even beginning to mature
 - active for almost all languages
- Primary digital language communities are almost non-existent
 - only Kalaallisut has an active primary digital language community, with support for text input and spell checking

Will Native languages be relegated to secondary digital communities?

OPEN ACCESS Freely available online

PLOS ONE

Digital Language Death

András Kornai*

Computer and Automation Research Institute, Hungarian Academy of Sciences, Budapest, Hungary

Abstract

Of the approximately 7,000 languages spoken today, some 2,500 are generally considered endangered. Here we argue that this consensus figure vastly underestimates the danger of digital language death, in that less than 5% of languages can still ascend to the digital realm. We present evidence of a massive die-off caused by the digitalization of languages.

Citation: Kornai A (2013) Digital Language Death. PLoS ONE 8(10): e77056. doi:10.1371/journal.pone.0077056

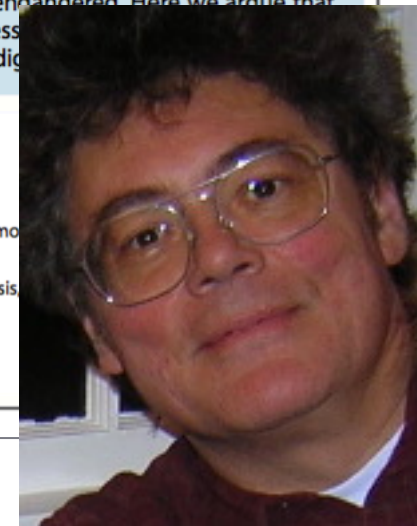
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design, data collection and analysis

“less than 5% of languages can still ascend to the digital realm”



Can languages survive without a primary digital community?

- Digital archives and secondary digital communities created from them cannot replace the communicative function of language
- “Just as the dodo is no less extinct for skeletal, drawings, or fossils being preserved in museums of natural history, online audio files of an elder tribesman reciting folk poetry will not facilitate digital ascent....” (Kornai 2013)
- This may well be too harsh.
- Just as good museums engage visitors, good secondary language communities can engage speakers in an active, participatory role

Summary

- “Can the web save my language?” (Buszard-Welcher 2001)
 - No.
 - But digital technologies can foster (secondary) communities of speakers.
- Can I save my language without the web?
 - No.
 - Digital technologies are not merely providing new domains for Native languages;
 - they are facilitating a transformation, a shift into a world in which digital communication is the norm.

Selected references

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Thank you

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