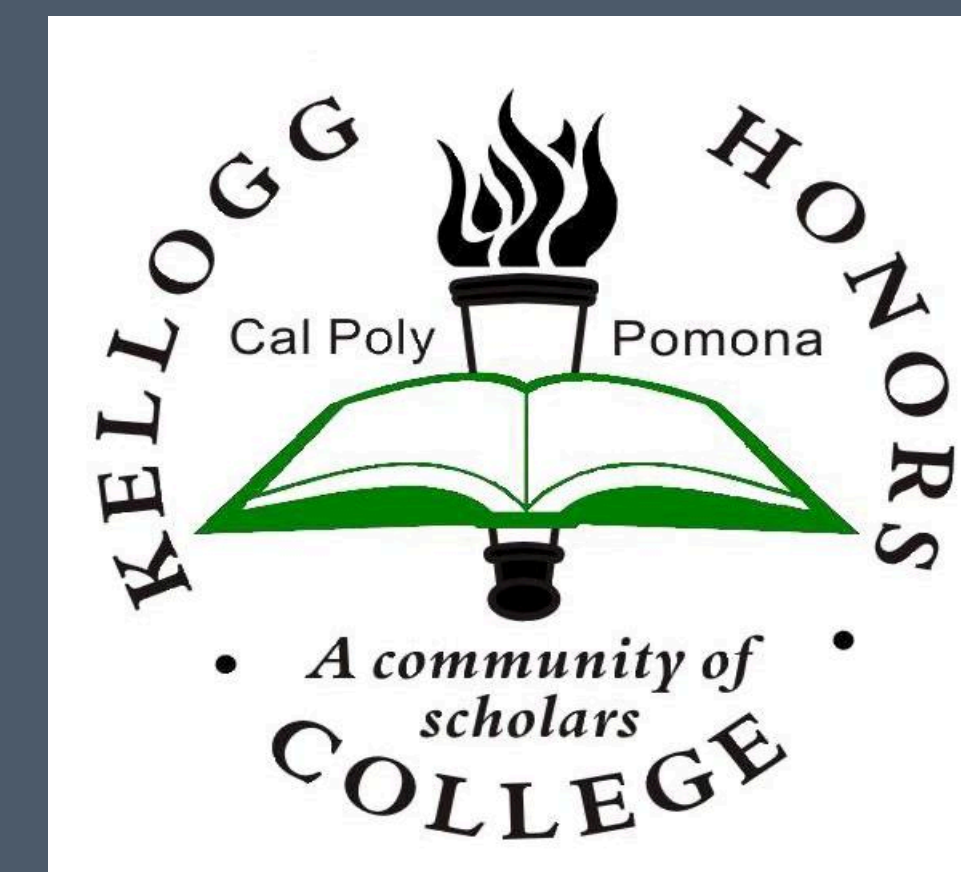


Do Different Learning Styles Improve Different Aspects of Second Language Learning

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ABSTRACT

To date, studies on the effect of learning styles on second language learning have mostly been analyzed on a quantitative level using surveys or tests such as the Paragon Learning Style Inventory and the English standardized tests. This has allowed these studies to use statistical methods to analyze participants testing and survey scores. The present study explores the effect of learning styles on second language learning from a qualitative, behavioral standpoint. In this study, three different learning styles were explored; visual, tactile, and auditory. The seven participants in this study were asked to first take a survey to identify their learning style. They were then asked to use Duolingo, a language learning website and app, to learn Danish for 20 minutes three times a week for 10 weeks. The participants screencast their study sessions, providing them to the researcher for analysis. The screencasts were analyzed using behavioral criteria including word repetition, audible confirmation checks, and practice attempts. This study suggests that auditory and visual learners use vocalizations indicating confirmation significantly more than tactile learners do. The study found no difference between auditory, visual, and tactile learners in the use of other behavioral indicators of learning.

BACKGROUND

Many of the relevant studies that were conducted on how learning styles effect second language learning were conducted more than a decade ago. These studies looked at many different aspects of learning styles and second language learning such as how people learned in a classroom setting, how race and field of study impacted learning behaviors in language learning, how computers can help with language learning, etc. Many of these papers focus on how to improve second language learning curriculum in classrooms by understanding how people learn these second languages.

One study conducted by Aranya Srijongjai in 2011 aimed to determine the learning style of Thai English students and determine whether or not this was affected by their achievement levels in a particular English course. This study found that there was no significant difference of a students learning style based on their achievement in the English course. This brings up another interesting aspect of learning styles in regards to language learning in that your learning style might impact your success when learning another language.

There are currently seven widely accepted learning styles: visual, auditory, verbal, tactile, logical, social, solitary. This study will be focusing on the auditory, tactile, and visual learning styles.

Auditory: Learners who learn better using sound (Elrick, 2018)

Tactile: Learners who learn better by doing and experiencing things (Elrick, 2018)

Visual: Learners who learn better when seeing and observing things (Elrick, 2018)

METHODS

The 9 participants in this study were first asked to take a multiple intelligences test through educationplanner.org. The results were screenshots and emailed to the analyst. They were then asked to learn Danish on an app called Duolingo. They were to use the app for 20 minutes three times a week for 10 weeks. They were also told to make sure each 20 minute session was at least 24 hours apart from the previous session. This would ensure that proper time had passed for the participant to process the information in the previous session. Every third recording, they were asked to screencast their session and send it to the analyst. These recordings were analyzed for word repetition, confirmation checks, noises, filler words, and repetitive listening. Lastly, they were asked to answer interview questions about their experience in learning Danish to get a background on how they think they did and what ideas were most prominent in their mind when they were learning Danish.

RESULTS

The data shows that participants did not seem to listen or repeat words as often as they used other vocal cues when learning Danish. These vocal cues include yes, okay, awesome, uhm etc. The auditory/visual learners when compared to the tactile learners used more confirmation words during each Duolingo session. Visual learners also repeat and listen to a word or phrase twice more than tactile or auditory learners do.

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DATA

	Auditory	Tactile	Visual
Rep X2	44	25	54
Rep X3	29	11	24
Rep X4+	14	6	16
noises	156	151	184
uhs/ums	189	115	151
confirmations	192	85	185
Listen X2	20	45	73
Listen X3	12	25	20
Listen X4+	8	28	9

Table 1: The 20 minute recordings for five weeks of four visual learners, three tactile learners, and two auditory learners were analyzed and averaged and them compiled into the above table.

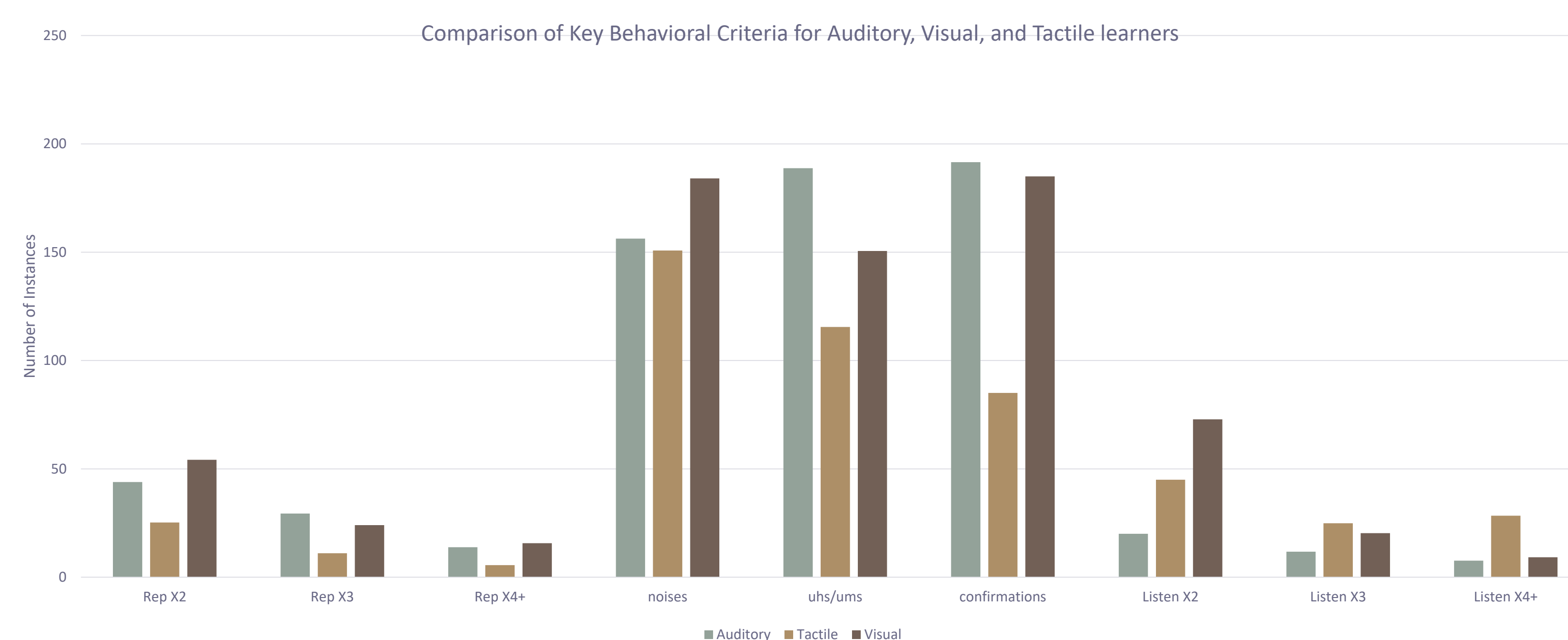


Figure 1: Visual representation of analysis results. Four visual learners, three tactile learners, and two auditory learners are represented.

CONCLUSION

Keeping in mind that our numbers are not large enough to come to any definitive conclusions, it is clear that visual learners repeat and listen to words twice more than both auditory and tactile learners. Elrick defined an auditory learner as someone who "tend[s] to learn better when the subject matter is reinforced by sound," (Elrick, 2018) which suggests that these learners would be the ones to repeat and listen to words more than other learning types, however this was not the case. The data clearly shows that auditory learners consistently listen to words less than both other types of learners. Using sound is a supposed emphasis of auditory learners however that might not be the case according to this study. Some future possible hypotheses could be that auditory learners only need one repetition because they pay more attention to the words the first time they are spoken and as such they do not need to reaffirm what they already heard.

Another interesting observation is that overall, vocal cues such as uhm, okay and other inadvertent noises are the most used form of vocal behavior in all three learning style groups. This indicates that even though there are differences when comparing the three learning styles to each other in the individual groups, when comparing the trend of each entire learning style to each other entire learning style, there is not a huge difference. All three learning styles used audible confirmation checks, uhms and inadvertent noises more than they listened or repeated words. This observation shows that there is still an emphasis on the auditory cues in comparison to listening or repeating words regardless of the learning style. Future research could explore the hypothesis that repeating these auditory cues help participants learn the language better than repeating or listening to the Danish words multiple times.

One study conducted by Rod Ellis involved two learners and found "that one learner might have abandoned her own preferred learning style in order to cope with the type of instruction provided and that the learning outcomes reflected what the learners set out to learn." (1989) This is an interesting point to keep in mind when looking at this data. Since the learners were forced to use Duolingo for a majority of their time spent learning Danish, the app could have inadvertently forced learners to adopt a variation of their learning style to cope with the instruction style. Future studies could use Duolingo, which might cater to a specific learning style, and other apps catering to other learning styles to see if there is a change in the data recorded from each of the different app. Significant changes in the data between the different apps could indicate that people change parts of their learning style to better utilize the different instruction styles.

FUTURE QUESTIONS

- Why do auditory learners seem to repeat words less than visual and tactile learners?
- Does repeating auditory cues help people learn languages better than repeating or listening does?
- Do tactile learners use less audible confirmation checks because they confirm their choices in a physical manner?
- Does your learning style change and adapt depending on what teaching style is being used?