

Running Head: SURVEY OF PASTORS

**Assessment of Support for Use and Actual Use of  
Communications Technology by Nazarene Pastors  
on the Chicago Central District**

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### Abstract

This cross-sectional telephone survey was designed to assess the level of use of particular types of communications technologies by churches on the Chicago Central District in the Church of the Nazarene, as well as to assess the attitudes of the pastors of these churches toward the use of these technologies. The participants were 39 of the 63 pastors on the Chicago Central District. In administering the survey, the same introduction and items were repeated in the same order, with the same voice inflection every time, with the exception of Item 30, which had no bearing on the survey results. The survey consisted of 30 items, the first 17 of which required an agreement rating regarding the attitudes of these pastors. Of the 13 remaining items, 10 required a yes/no response, mostly concerning the ownership and usage of various types of technologies by the churches. The remaining three items asked for congregation size, the Sunday morning church attendance, and the age category of the pastor. Fifteen of the agreement rating items were clustered in sets of three around various topics. These topics were type of technology used in a church service (scripture displayed on a projector screen, words of music displayed on a projector screen, or playing an audio tape to clarify a sermon point), type of contact for notification of an activity change at church (e-mail, post card, or telephone call), type of contact for parishioners missing church when ill (e-mail, telephone call or personal visit), type of contact for counseling people with personal problems (e-mail, telephone call or person to person contact), and type of contact for community outreach (web-site, door to door or telephone call). Descriptive statistics were calculated for each of the items requiring an agreement rating. Five separate single-factor within-subjects analysis of variance were then conducted on the ratings clustered around each topic listed above to determine where significant differences might lie. The pastors were also divided into two age categories, 20-49 (N=19) and 50-79 (N=20). Independent samples t-tests were conducted on the ratings given on Items 1-17 using the age of the pastors as the independent variable. Results of three of the single-factor within-subjects ANOVAs mentioned above were significant. Here, major differences were found in each category with the exception of type of contact for community outreach. Regarding use of technology in a church service, displaying words of worship music was rated superior. Telephone contact was rated highest for an activity change notification, and type of contact for parishioners who have missed church services because they are ill was a personal visit. Person to person contact was rated very high in regard to counseling a person who has personal problems. There were significant, or marginally significant differences on the t-tests which showed that the older age group of pastors were in stronger agreement of support for the following items: on-line Bible study, personal Bible study on tape, door to door outreach and phone calls as a type of community outreach. The results of this research suggest that pastors serving on the Chicago Central District show strongest support for using technology to serve the congregation as a whole for utilitarian and enhancement purposes and the weakest support when the pastor is reaching out to serve an individual's personal needs. Having surveyed approximately 62% of the entire population, it is most likely that these results are reliable. To establish external validity, this study can be replicated for larger scale Nazarene pastor populations.

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The average American is affected by digitalization at every turn - even some in the Amish communities utilize the digital to expedite their business dealings (Brende et al., 1996.) Our homes, public institutions, means of transportation and places of business are filled with digital equipment, appliances and gadgets that aid and assist, inform, observe, and entertain us. Ipods are the latest entertainment gadget - little computers that allow us to listen to hundreds of songs that the owner has previously selected, at the press of a button.

The advent of the personal computer, internet, and multimedia software has brought about a communication and information explosion which has affected the lives of people around the world so much so that sociologists are attempting to study the effects on societies at large. Technology gives us easier, quicker access to what we need, which frees up our time for other things. It can also complicate life when there are too many options, or if the computer crashes, or freshly created documents are mistakenly lost by pushing the wrong button before it is saved. People who are unable to, or choose not to utilize technology "...risk being excluded from the social and economic benefits..."(Moodley et al., 2004) of life.

What about the church? Some churches are now digitalized. They have digital boards that control the lighting, projectors and sound systems. There are screens, operated digitally, that display the words to worship music, scripture, videos, etc. Those

in the “missionary society” (or those who have friends or family members on the mission field) can interact with our missionaries frequently and inexpensively. In some churches, the staff communicate with one another by web mail and/or two-way radios. These are all good things.

This author’s personal church experiences, as well as the background research conducted for the purposes of this paper, caused her to wonder about other churches and the types of technology they use. Do other churches use a projector screen to display the words to worship music and/or scripture, or display videos of Christian movies, or events, during the service? Do they play audio tapes during the service? Furthermore, are other churches internet connected? What are pastors’ attitudes about utilizing these things? It was decided that the best way to find out would be to go straight to the source - pastors of churches, by means of a telephone survey - and to ask said pastors what technologies their churches possess and use, as well as what their personal opinion was on the use of these technologies, even if their particular church did not possess those items. It was also decided to assess the impact of age of the pastor upon the use of these various technologies.

Human relationships are part of “the Church.” The Bible says “Let us not give up meeting together...but let us encourage one another...” (Hebrews 10:25, NIV) One might wonder whether modern communications technology has affected interpersonal relationships among pastors and parishioners. Have these relationships within the church experienced a negative impact because of digital technology use? Has e-mail replaced personal contact? For example, when there is a change of plans in a church activity schedule and contact is ordinarily made via e-mail, are those who are not “hooked up”

left out? In light of this issue I thought that it would be interesting to find out how pastors felt about its use. I hypothesized that e-mail would be the most supported means for contact in regard to an activity change. I also wondered: does “the Church” reach out to its parishioners? If so, by what means? I hypothesized that if a parishioner misses a church service because they are ill, it is unlikely that they would receive a personal visit, as opposed to contact by telephone or e-mail. In an attempt to address this issue, the present research asked the pastors to rate how strongly they were in agreement with each method of contact. What about the “unchurched?” How are they reached? Does the church have a web-site? The church that I currently attend is very large (average Sunday morning attendance is 1000) and is run like a well-oiled machine, with a caring attitude for “others.” Community outreach is important to them. I have observed my church using various methods of outreach which include having a web-site, telephoning people who have visited our church (if they fill out a visitor’s card) and going door to door. My church uses other methods as well, but for the purposes of this paper, they are not mentioned here. Although my church does use multiple methods of outreach, I suspected that many churches do not. I hypothesized that, overall, pastors’ attitudes about church outreach would be traditional, which is strongest support for going door to door in the community. McQuillen ( et al., 2003) talks about how the time that is saved by technology also makes us “less interdependent and...more self-reliant...” He later adds “The absence of the characteristics associated with face-to-face communication can result in a loss of fidelity and an increase in the psychological distance between interactants.” If someone - parishioner, or not - is in need of counsel, does the church offer counseling? If so, by what means? Schaper (et al., 2003) states “The Internet is even more impersonal.

A person is not very likely to confess a sin or share a fear or tell a secret...Face-to-face, over time, they may feel safe to do so.” In this present day and age, time is a precious commodity. Society is very busy with work as well as a multitude of leisure activities. It can be very tempting to assist the efficiency of one’s time management with the aid of technology, even when it comes to counseling another human being. I personally would not want to partake in counseling in any other way than face to face, person to person contact. I feel that this is important not only because of privacy issues, but also because our physiological senses pick up on other aspects of personal communication that would be difficult to sense if communication is done digitally (rate of breathing, body language, type of eye contact, voice inflection, etc.) My hypothesis was that pastors would strongly agree that person to person contact is the best way to counsel a person who has personal problems, and strongly disagree with a statement that e-mail is the best means. In addition, I predicted that the group of younger pastors would be in stronger agreement than the group of older pastors in regard to the use of technology for any purpose mentioned in this survey.

## **Method**

### Participants

The participants were pastors serving on the Chicago Central District of the Church of the Nazarene. Thirty-nine of the 63 pastors on the district participated in this telephone survey. Of the remaining 24, 22 were unavailable to be reached and 2 declined the offer to participate. Six separate age groups were categorized, ranging in age from 20-29, 30-39, 40-49, 50-59, 60-69 and 70-79 years old. A Spanish speaking interpreter was

available to assist in 2 out of 7 of the days that calls were made, since some of the pastors only spoke Spanish. In order to make contact, the directory for the 2005 Chicago Central District pastors' home and church telephone numbers was obtained from Benner Library located on the campus of Olivet Nazarene University.

### Design

A cross-sectional survey was utilized in conducting the present research. The research began with the goal of surveying the entire population. However, this was not possible since 24 of the pastors did not participate for reasons noted above. In addition to the descriptive statistics provided by the survey, one important independent variable examined in this study was the age of the pastor. Each of the ratings given on Items 1-17 served as a dependent variable and was analyzed as a function of this age variable. In addition to casting the data from Items 1-17 in the form of an independent -groups design using the age of the pastor variable, they were also analyzed as five separate single-factor within-subjects designs with three levels each. For example, the ratings given by all 39 participants on Items 12, 13, and 14 regarding the most appropriate means of providing counseling (e-mail, telephone or person to person contact) were analyzed to see if there was a significant effect of type of counseling on these ratings. Of course, type of counseling was viewed as the independent variable and the dependent variable was the ratings given on these items. In the remaining four single-factor within-subjects analyses, the independent variables were technology used in a church service, type of contact for an activity change notification, type of contact for parishioners who have missed church services because they are ill and type of contact for community outreach. The ratings on the three survey items related to each of these variables served as the dependent variable.

### Material

Of the 30 statements on the survey, the first 17 items were statements requiring the participants to rate their strength of agreement on a 7 point ratings scale, with number 1 being strongly disagree, and number 7 being strongly agree. These statements are clustered in groups of 3 around various topics which include the type of technology used during a church service, the type of contact used for activity change notification, the type of contact for parishioners who have missed church services because they are ill, the type of contact for counseling people with personal problems and the type of contact used for community outreach. The remaining 2 statements, out of the 17 that utilized a ratings scale, had to do with on-line Bible study and making use of an audio tape to study scripture. Following the sets of clustered questions were two questions pertaining to congregation size and also the average Sunday morning church attendance. Each of the 13 remaining items on the survey, with the exception of Item 29 (age group selection,) were items that required yes/no responses. Four of these items asked whether or not the church (of the pastor being questioned) owned certain technological items, followed by a set of five questions that asked what type of images were displayed on the projector screen during worship. Of course, if the church did not use a projector screen, those questions were not asked. To complete the survey, the pastor was thanked for giving his time and then asked if he would like a copy of the survey upon completion. See Appendix A for a complete copy of the survey.

### Procedure

A photocopy of the Chicago Central District Nazarene Church Directory was

obtained from the library on the university campus. Each church was numbered in the order that they appeared. The date and start time were recorded in a log book next to the assigned church number each time a call was made. The calls were made systematically, starting with number 1 and ending with number 63. If there was no response when the church was called, the parsonage (the parsonage was assigned the same number in the logbook as the church) was called next. Start time and type of response received by the caller (i.e: response from pastor, no answer, answering machine, if someone other than the pastor was home-when to call back, etc.) were recorded next to the assigned number in the log book. A survey response (completion or rejection of survey by the pastor) was noted by a checkmark. The procedure was started over again upon completion of attempted calls made from the entire list of churches. Breaks and start times varied. Calls were made on 7 separate days, across the span of 25 days, on different days of the week (Monday through Saturday, excluding Wednesday,) at different times of the day, with the hope of “catching” the pastor at the right time. It should be noted that the survey took place in December and in the beginning of January, which is a busy season for most people who celebrate Christmas and New Year’s Day.

In a few of the churches, the pastor spoke only Spanish. When the receiver of a call spoke only Spanish, the notation “Sp” was recorded for convenient access when an interpreter was available. The interpreter was available on only 2 dates, and only during a limited time frame. It was explained to her that these surveys were confidential, and she agreed to keep this confidentiality before we began. The interpreter was not offered any remuneration for her voluntary time until after her work was done. The author of this survey has offered to take her out to lunch. During the Spanish speaking surveys, the

interpreter had 3 responses, one of whom (as it turned out) spoke English as well. This author obtained direct responses from that particular pastor. The procedure that the interpreter used was to first introduce herself, and then state the reason why she was calling and who she was making the call for, explaining that the author of the survey did not speak Spanish. The survey was then conducted in Spanish. The statements and questions were interpreted in the same manner each time.

The survey began with an approximately 30 second scripted introduction, which stated who conducted the survey and why, and where the results of the survey would be shared; confidentiality was stressed to the pastor, and a suggested amount of time the rest of the survey should take (it took 3 ½ minutes when rehearsed) was given, and then a request was made to continue with the survey. The first 29 items were read word for word, with emphasis placed on the **emboldened** words to help ensure that voice inflection was the same each time the statements or questions were read (see Appendix A). The survey consisted of a total of 30 statements and questions. The last question first expressed gratitude for the pastor's time and then inquired whether or not the pastor would like a copy of the results. Since the last question had nothing to do with the actual results of the survey, it was slightly altered on occasion. Time to converse was given upon completion of the survey, whenever a pastor had questions or comments.

## **Results**

Table 1 shows the mean, median and mode for the strength of agreement ratings for Items 1-17 on the survey. These ratings reflect the pastor's degree of support for the use of communications technologies for the various functions of the church and also in

regard to their opinions about the use of technology for personal Bible study. Overall, the pastors showed fairly strong support for displaying scripture and music on the screen to enhance worship services, with music having the strongest support. In contrast, playing an audio tape during a sermon scored fairly low. Notification by telephone because of a change in church activities was rated higher than mailing postcards or using e-mail. E-mail had a slightly stronger rating over the post cards. Strength of agreement for e-mail contact when a parishioner is ill, and also for personal counseling, received consistently low average scores compared to the other types of contact. For personal counseling, note that person to person contact was rated very high. Telephoning a parishioner who missed church because they are ill was rated slightly lower in agreement in contrast to personal contact.

**Table 1****Descriptive Statistics for Agreement Ratings on Survey Items 1 - 17**

<b>Variable</b>	<b>Mean</b>	<b>Median</b>	<b>Mode</b>
1. Scripture on Screen Enhances Service	5.410	6.000	7.000
2. Music on Screen Enhances Service	5.538	6.000	7.000
3. Audio Tape Clarifies Message	3.897	4.000	3.000
4. Bible Study On-line: Effective	3.410	3.000	3.000
5. Bible on Tape: Effective Personal Study	4.923	5.000	5.000
6. Change of Schedule: E-mail Notification	4.487	5.000	5.000
7. Change of Schedule: Post Card Notification	4.256	5.000	5.000
8. Change of Schedule: Phone Notification	6.282	7.000	7.000
9. Missed Church Because Ill: E-mail Contact	3.794	4.000	4.000
10. Missed Church Because Ill: Phone Contact	6.051	6.000	7.000
11. Missed Church Because Ill: Personal Visit	6.641	7.000	7.000
12. Personal Counseling: E-mail	2.667	2.000	2.000
13. Personal Counseling: Phone Call	4.615	5.000	5.000
14. Personal Counseling: Personal to Person	6.871	7.000	7.000
15. Community Outreach: Web-site	5.077	5.000	5.000
16. Community Outreach: Door to Door	4.769	5.000	7.000
17. Community Outreach: Phone Call	4.846	5.000	5.000

The data that the descriptive statistics in Table 1 are based upon were subjected to five separate single-factor within subjects analyses of variance to determine where significant differences might lie. Table 2 summarizes the results of these analyses.

**Table 2****Analyses of Variance Summaries for Single-Factor Within-Subject Analyses  
Conducted on Agreement Ratings**

<b>Independent Variable</b>	<b>F-observed</b>	<b>DF</b>	<b>MSE</b>	<b>Probability</b>
<i>Technology Used in Service</i> (Scripture on Screen, Music on Screen, Audio Tape Played)	21.098	1.351	2.280	.000
<i>Type of Contact for Activity Change Notification</i> (E-mail, Post Cards, Telephone Calls)	22.959	1.722	2.426	.000
<i>Type of Contact for Parishioners Who Have Missed Church Services Because They are Ill</i> (E-mail, Telephone Calls, Personal Visits)	59.026	1.616	1.845	.000
<i>Type of Contact for Counseling People with Personal Problems</i> (E-mail, Telephone Calls, Person to Person Contact)	167.081	1.847	1.119	.000
<i>Type of Contact for Community Outreach</i> (Web-site, Door to Door, Telephone Calls)	.416	1.561	3.080	.611

As shown in Table 2, there was not a significant difference across the conditions of the type of Community Outreach variable (Items 15, 16 & 17 on the survey.) However, there were significant differences on the groupings of items composing the other four independent variables. Follow up Bonferroni pairwise comparisons were conducted to determine where the significant differences lie. For Items numbered 1, 2 and 3 on the survey, regarding use of technology during a church service, there were no significant differences found between scripture on the screen and music on the screen and both of these technologies were rated superior to audio tape played during a service. For Items 6, 7 and 8, which addressed notification of a schedule change, performance for telephone calls was rated superior to utilizing post cards and e-mail, which did not differ among themselves. Items 9, 10 and 11 relate to the type of contact used to contact parishioners who missed church services because they were ill. For this variable (e-mail, telephone call, personal visit) all conditions had significant differences from one another. Personal visits and telephone calls were rated above a 6 on the ratings scale. Performance was rated best for personal visits, followed by telephone calls and e-mail was rated lowest (under 4.) Survey Items numbered 12, 13 and 14 had to do with the type of contact preferred for counseling parishioners with personal problems (e-mail, telephone, person to person contact). All conditions differed significantly from one another. Personal contact was rated best, followed by telephone contact, and e-mail had the lowest rating.

Further tests (Independent Samples T- tests) were conducted for Items 1-17 to see if the age of the pastor had anything to do with the different responses. Table 3 shows how many pastors were in each age group. Because of the uneven distribution of pastors in the various age groups, the three youngest age categories, (20-29, 30-39 and 40-49)

were combined to form a single age category (20 - 49) and the oldest age groups (50-59, 60-69, and 70-79) were formed into another single age category (50-79.)

**Table 3**

**Age Group and Number of Pastors**

Age	Frequency
20 - 29	3
30 - 39	4
40 - 49	12
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50 - 59	10
60 - 69	7
70 - 79	3

As shown above, the numbers for the new groupings are fairly evenly divided. For the 20-49 age group, N = 19, and for the 50-79 age group, N = 20. Table 4 displays the mean agreement rating as a function of age category of pastor for Items 1-17 on the survey. Independent Samples T- tests were conducted on all 17 survey items, using the age of the pastor as the independent variable.

Table 4

**Mean Agreement Rating as a Function of Age Category of Pastor  
for Items 1 - 17 on Survey**

<b>Variable</b>	<b>Age 20 - 49</b>	<b>Age 50 - 79</b>
1. Scripture on Screen Enhances Service	5.474	5.350
2. Music on Screen Enhances Service	5.842	5.250
3. Audio Tape Clarifies Message	3.737	4.050
<b>4. Bible Study On-line: Effective</b>	<b>2.947</b>	<b>3.850</b>
<b>5. Bible on Tape: Effective Personal Study</b>	<b>4.368</b>	<b>5.450</b>
6. Change of Schedule: E-mail Notification	4.632	4.350
7. Change of Schedule: Post Card Notification	3.947	4.550
8. Change of Schedule: Phone Notification	6.105	6.450
9. Missed Church Because Ill: E-mail Contact	3.789	3.800
10. Missed Church Because Ill: Phone Contact	5.737	6.350
11. Missed Church Because Ill: Personal Visit	6.579	6.700
12. Personal Counseling: E-mail	2.842	2.500
13. Personal Counseling: Phone Call	4.579	4.650
14. Personal Counseling: Person to Person	6.947	6.800
15. Community Outreach: Web-site	5.158	5.000
<b>16. Community Outreach: Door to Door</b>	<b>3.947</b>	<b>5.550</b>
<b>17. Community Outreach: Phone Call</b>	<b>4.421</b>	<b>5.250</b>

The results of the t-tests displayed in Table 5 show no significant differences for Items 1 - 3 and 6 - 15. There were significant differences, or marginally significant differences, however, on Items 4, 5, 16 and 17. Age Group 50-79 indicated stronger agreement (as opposed to Age Group 20-49) in favor of all four items, which are: (4) On-line Bible study, (5) personal Bible study on tape, (16) Door to door outreach and (17) Phone calls as a type of community outreach.

**Table 5**

**Summary for T-tests on Agreement Ratings for Items 1 - 17 on Survey Using Age Category of Pastor as the Independent Variable**

Variable	T-observed	DF	SEM	Probability
1. Scripture on Screen	-.264	37	.469	.793
2. Music on Screen	-1.225	31.692	.483	.230
3. Audio Tape During Sermon	.576	37	.544	.568
<b>4. On-line Bible Study</b>	<b>1.736</b>	<b>33.027</b>	<b>.525</b>	<b>.092</b>
<b>5. Bible Study on Tape</b>	<b>2.711</b>	<b>37</b>	<b>.401</b>	<b>.010</b>
6. Activities Change: E-mail	-.457	37	.616	.650
7. Activities Change: Post Card	1.045	37	.577	.303
8. Activities Change: Phone Call	1.144	37	.301	.260
9. Missed Church: E-mail	.019	37	.553	.985
10. Missed Church: Phone Call	1.614	24.469	.380	.119
11. Missed Church: Personal Visit	.414	37	.292	.681
12. Counseling: E-mail	-.758	37	.452	.454
13. Counseling: Telephone	.172	37	.412	.864
14. Counseling: Personal Contact	-1.149	26.332	.128	.261
15. Outreach: Web-site	-.296	37	.533	.769
<b>16. Outreach: Door to Door</b>	<b>2.851</b>	<b>37</b>	<b>.562</b>	<b>.007</b>
<b>17. Outreach: Telephone</b>	<b>1.876</b>	<b>37</b>	<b>.442</b>	<b>.069</b>

Table 6 shows how many churches possess certain communications technology items.

**Table 6**

**Number of Churches Owning or Not Owning Various Communications Technology Items**

<b>Communication Technology Item</b>	<b>Number of Responses: "YES"</b>	<b>Number of Responses: "NO"</b>
Projector Screen	29	10
Microphone & Speakers	38	1
Computer	30	9
Internet Connection	25	14

Almost all of the churches own a microphone & speakers. The number of churches that own a projector screen are slightly less than those that have computers. Most of the churches that own computers also have internet connections.

Below, Table 7 indicates various types of imagery/media displayed, or not displayed on a projector screen during worship.

**Table 7****Type of Imagery or Media Displayed on Projector Screen During Worship and Number of Churches that Use or Do Not Use Them**

<b>Type of Imagery/Media</b>	<b>Number of Responses: “YES”</b>	<b>Number of Responses: “NO”</b>
Scripture	21	18
Words to Worship Music	26	13
Images of Nature	20	19
Scenes from the Bible	18	21
Videotapes or DVD's of Christian Movies or Events	21	18

As shown in Tables 6 and 7, it appears that churches own more projector screens than they actually use. Of those that do own a projector screen, displaying words to worship music was the most popular use. This was followed by displaying scripture, as well as tapes & DVD's, which had equal amounts of use. Next was images of nature, followed by scenes from the Bible.

### **Discussion**

The purpose of the present research was to assess the amount of support for the use of technology, as well as it's actual use, by Nazarene pastors on the Chicago Central District. Before the survey was conducted, I hypothesized that in regard to notice for a change in schedule for church activities, e-mail would rank strongest in the agreement ratings. I also hypothesized that the pastors, in regard to contacting a parishioner who missed church because they were ill, would most strongly agree that e-mail was the most

appropriate means of contact. In addition, I hypothesized that person to person contact for counseling a person who has personal problems would rate strongest in the agreement ratings by pastors. Another hypothesis I had was that pastors would most strongly favor the traditional means of door to door contact, in regard to community outreach. Finally, I hypothesized that technology used for any reason would be more strongly supported by the younger group of pastors when using the age category of pastor as the independent variable.

This hypothesis was not supported. Telephone notification rated highest, and differed with statistical significance from e-mail. The hypothesis, in regard to visiting an ill parishioner, was not supported either. All means of contact differed significantly from one another, with e-mail having the least rating. The hypothesis in regard to personal counseling was supported. The pastors' mean rating for person to person was rated very high and was significantly superior to (6.872 on a 7 point scale) both counseling by telephone and by e-mail. E-mail had the weakest support. Again, my hypothesis appears to be wrong. There was no statistical difference between any of the methods. My prediction that the younger age group would be in stronger agreement than the older age group in regard to any type of technology use that was rated in this survey was completely wrong. It was the older age group that was in stronger agreement with technological use when there was a significant difference across the age categories. These items were in regard to Bible study and community outreach.

In light of my findings, it appears that the pastors' assessed attitudes about technology being used in the church are uniformly eclectic. It seems that pastors show strongest agreement for using technology when it comes to assisting the congregation as

a whole, for the purpose of utility and enhancement, like showing words to scripture and/or music on a screen. Technology use receives the weakest support when the pastor is reaching out to serve an individual's personal needs in the church body. For example, e-mail was the weakest in agreement ratings for contacting a person who missed church, and also for counseling a person who has personal problems. It appears that pastors today still believe that the "personal touch" is an important thing. I thought it was very interesting to see that the 50-79 Age Group was in stronger agreement with On-line Bible study, as well as listening to audio tape for personal Bible study. Could it be that this group is more sensitive to those with disabilities in their congregations? For example, if an aged person cannot go to church in frigid weather, they can have group study on-line. Also, if a person's eye sight is poor, they can listen to scripture, as opposed to reading it. Door to door and telephone outreach were favored more strongly by the 50-79 Age Group, while web-site outreach did not significantly differ from the 20-49 Age Group. What does this mean? Does the 50-79 Age Group think that when more of a variety of methods are used, more people will be reached? One can only conjecture. Given the amount of data that came forth from this study, other aspects can be examined, as well. For example, what do the results imply about the structure of the churches? If pastors want to maintain a "personal touch," what does this say about large churches? How are staffing needs fulfilled? What would the head pastor's responsibilities be? Should there be a limit on church size? These questions are implications for further research.

Although it was my intention to survey 100% of the pastors, this did not happen. Out of the 63 pastors on my list, I was able to survey 39 of them, which is approximately 62% of the entire population. As long as procedure was followed in a scientific manner

(it was), the percentage most likely makes these research results reliable regarding pastors on the Chicago Central District. However, the Church of the Nazarene is world wide. To establish external validity, this study can be replicated for large scale populations.

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## Appendix A

### Survey of Pastors in Chicago Central District

Hi. My name is Carolyn Truelove and I am a student at Olivet Nazarene University. I am conducting a survey of the Chicago Central District Nazarene pastors in regard to technology being used in the church, and how strongly pastors support its use. The results of this research will be shared with the Association of Nazarene Sociologists and Researchers; however, your individual responses will be completely confidential. This survey should only take about 3 1/2 minutes of your time. May I ask you some questions?

Okay. On a scale of 1-7, with **1** being strongly **disagree**, and **7** being strongly **agree**, how would you rate the following statements? Remember, **higher** numbers mean stronger **agreement** with the statement.

1. The use of a **projector screen** to display words of **scripture** enhances the quality of a church service.

1            2            3            4            5            6            7

2. The use of a **projector screen** to display words of **worship music** enhances the quality of a church service.

1            2            3            4            5            6            7

3. Playing an **audio tape recording** at different times **during a sermon** is an effective way to clarify major points of the message.

1            2            3            4            5            6            7

4. Conducting Bible study On-line, via the computer is an effective means of having a group Bible study.

1            2            3            4            5            6            7

5. Listening to **scripture on tape** is an effective means for an individual to study the Bible.

1            2            3            4            5            6            7

**\*\*\*Rate** each of the following on a scale of **1 -7** regarding the most appropriate means to contact parishioners when there is a **change of schedule for church activities**.

Remember, **higher** numbers indicate **stronger agreement**:

**6. E-mail**

1            2            3            4            5            6            7

**7. Sending post cards**

1            2            3            4            5            6            7

**8. Telephone calls**

1            2            3            4            5            6            7

**\*\*\*Rate** each of the following on a scale of **1 -7** regarding the most appropriate means to contact parishioners who have **missed church services** because **they are ill**. Again,

**higher** numbers indicate **stronger agreement**:

**9. E-mail**

1            2            3            4            5            6            7

**10. Telephone calls**

1            2            3            4            5            6            7

**11. Personal visits**

1            2            3            4            5            6            7

**\*\*\*Rate** each of the following on a scale of **1 - 7** regarding the most appropriate means for **counseling** parishioners who have **personal problems**. **Higher** numbers indicate **stronger agreement**:

**12. E-mail**

1            2            3            4            5            6            7

**13. Telephone calls**

1            2            3            4            5            6            7

**14. Person to person contact**

1            2            3            4            5            6            7

**\*\*\*Rate** each of the following on a scale of **1 - 7** regarding the most appropriate means for **community outreach**. Remember, **higher** numbers indicate **stronger agreement**:

**15. Having a church web-site**

1            2            3            4            5            6            7

16. **Going door to door**

1            2            3            4            5            6            7

17. **Telephone calls**

1            2            3            4            5            6            7

18. What size is your congregation?

19. What is your average Sunday morning church attendance?

\*\*\*Please **respond** with a **yes** or **no** to the following questions:

20. Does your church have a **projector screen**?.....yes      no

21. Does your church have a **microphone and speakers**?.....yes      no

22. Does your church have a **computer**?.....yes      no

23. Does your church have an **internet connection**?.....yes      no

\*\*\*Please **respond** with a **yes** or **no** regarding **whether or not** your church displays each of the following on a **projector screen** during **worship**:

24. **Scripture**.....yes      no

25. **Words to worship music**.....yes      no

26. **Visual images** such as **sunsets, bodies of water** or **clouds in the sky**  
.....yes      no

27. **Visual images** such as **scenes** from the **Bible**.....yes      no

28. **Videotapes** or **DVD's** of **Christian movies** or **events**.....yes      no

29. Would you mind telling me what age group you are in?

- 20 - 29
- 30 - 39
- 40 - 49
- 50 - 59
- 60 - 69
- 70 - 79

30. Thank you so much for your time. Would you like for me to send you the results of my survey when it has been completed? .....yes      no