TECHNICAL AND INTERPRETIVE REPORT:
Developing a Profile of the Optician for the Future

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Executive Summary

This report describes a project undertaken by a group of industry leaders with the long-term goal of improving the profession of Opticianry. The report is divided into two sections. The first section provides a technical description of the research study. Its specific purposes were:

1. To identify what top performing Opticians do, the skills and competencies they possess, their education and credentials, and their contributions to their organizations.

2. To develop a profile of the Optician for the future to improve education, training, certification, and the promotion of the profession to their employers and the public.

The development of the methods used to collect data included multiple steps:

- Meeting with the working group to plan the study.
- Gathering background information.
- Selecting a research design that will address the purposes of the study.
- Developing the survey to collect the data.
- Drawing the sample and administering the survey.

The results are presented in two forms: detailed statistical tables for the interested reader, and a presentation describing key findings that can be used to describe the results to audiences. The results are presented in terms of the following topics:

- Number of participants in the survey.
- Types of Opticianry businesses in the sample.
- Size of Opticianry businesses in the sample.
• Education of Opticians.
• Education of high performing Opticians.
• Training of Opticians.
• Training of high performing Opticians.
• Certifications and licenses of Opticians.
• Certifications and licenses of high performing Opticians.
• Association memberships of Opticians.
• Association memberships of high performing Opticians.
• Continuing education of Opticians.
• Continuing education of high performing Opticians.
• Financial contributions of Opticians.
• Financial contributions of high performing Opticians.

The results show that there is a wide variation between Opticians on their credentials and their financial contributions. Moreover, high performing Opticians tend to have more credentials and make greater financial contributions to their companies.

The second section of the report provides an interpretation of the results. Its purpose is to interpret the results of the study in terms of four major topics:

1. Recommendations for improving the profession.
2. Recommendations for improving the job performance of Opticians.
3. Recommendations for improving the management practices of Opticianry businesses.
4. Observations on whether it is worthwhile financially to invest in the development of Opticians.

The interpretation of the results is summarized in terms of 12 specific recommendations. These recommendations are intended to meaningfully address the primary goals of this project – to develop the contributions of Opticians to their businesses and the profession of Opticianry.
TECHNICAL DESCRIPTION OF THE STUDY

Purposes and Sponsors of the Study

This report describes a project undertaken by a group of industry leaders with the long-term goal of improving the profession of Opticianry. The statement below describes the overall intended purpose of the project.

*The purpose of this study is to identify an appropriate and well-defined set of knowledge, skills and behavioral competencies that could be employed to develop a curriculum and utilized to produce Opticians who effectively meet the needs of both consumers and businesses. The study will also produce a credentialing program model that ensures competent Opticians who provide high level eyecare outcomes for consumers, leading to more successful business results. In doing so, the study’s results will support the future of Opticianry and eyecare, as opposed to attempting to validate past performance.*

The overall plan for this project can be described in four phases:

1. Define the need and the result desired.
2. Develop the profile of the Optician of the future.
3. Define the education and training required to create that Optician.
4. Validate the recommendations through certification and testing.

This research described in this report was intended to achieve the first two phases. In more detail, its specific purposes were:

1. To identify what top performing Opticians do, the skills and competencies they possess, their education and credentials, and their contributions to their organizations.
2. To develop a profile of the Optician for the future to improve education, training, certification, and the promotion of the profession to their employers and the public.
The study was sponsored, planned, and supervised by a working group of members from the following professional associations:

- American Board of Opticianry (ABO), representing certifying bodies (Jim Morris)
- National Academy of Opticianry (NAO), representing written education (Gaye Wilson)
- National Association of Optometrists and Opticians (NAOO), representing retail employers (Wally Lovejoy)
- National Commission of State Opticianry Regulatory Boards (NCSORB), representing licensing boards (Jerry Himes)
- National Contact Lens Examiners (NCLE), representing contact lenses
- National Federation of Opticianry Schools (NFOS), representing formal Opticianry education (William Underwood)
- Optician's Association of America (OAA), representing state associations and independent employers of Opticians (Chris Allen)

Other members of the working group included:

- Doug Pelkey of Luxottica Retail
- Ed DeGennaro of In Focus Optical Consulting

**Methods Used to Collect Data**

The development of the methods used to collect data included multiple steps as described below.
Meeting with the Working Group

The project started with an in-person meeting with all members of the working group (listed above) and the research consultant (author of this report) to agree on the goals of the project, to identify methods and resources needed, to construct an overall project plan, and to agree on the deliverables and timeframe. The meeting took place on September 23, 2013, in Cincinnati, Ohio. The agenda for the meeting is contained in Appendix A.

Aside from the above topics, specific discussions took place on the following subjects that informed the development of the methods to be used.

- Handout 1: Alternative Approaches for Conducting a Gap Analysis Study When Using a Survey Methodology with Employers
- Handout 2: Background Information on Opticianry
- Handout 3: Potential Survey Content
- Handout 4: Sampling and Administration Issues

Appendix B contains the handouts used, which provide more detail. Appendix C contains the notes recorded at the meeting, which describe the accomplishments, decisions, and next steps.

Gathering Background Information

In order to understand what is currently known about Opticians and as input into the design of the study, a wide range of background information was gathered. In addition to other materials sent by working group members (listed in Appendix C), the following publications were acquired and reviewed:


Job analysis information on tasks and knowledge areas were acquired from the following sources:
• U.S. Department of Labor, Occupational Information Network, Dispensing Opticians (occupational code 29-2081.00).


• Optician Summit Clinical Competencies Spectacle.

• Optician Summit Clinical Competencies Contact Lenses.

• Topics of course in Opticianry school programs.

Selecting a Research Design

After evaluating the advantages and disadvantages of various research designs with the research consultant, the working group made the following decision on the research design.

• An Internet-based survey would be used to gather information from the largest number of respondents at the least cost.

• All the members of the working group would sponsor the survey to enhance participation rates.

• All the members of the working group would provide lists of Opticians to sample to ensure maximal coverage of the profession.

• Participants would be offered $10 Starbucks gift cards to enhance participation.

• The surveys would be sent to the supervisors of Opticians rather than to Opticians themselves in order to get more honest and objective information. That is, the supervisors would be asked to describe the Opticians reporting to
them. This was important because the type of information sought (e.g., job performance, skill levels, etc.) might be subject to socially desirable responding of Opticians provided the information on themselves.

- The computer administration would assign every other supervisor to report on either the highest or lowest performing Optician that works for that supervisor.

- Originally, it was also planned that large organizations might identify the high and low performing Opticians based on financial metrics, but only one large organization did this. The others preferred to use the research design where the supervisor was assigned to report on either a high or low performing Optician.

- The survey would collect information on a wide range of topics relevant to identifying the Optician of the future as described below.

**Developing the Survey**

The instructions to the survey read as follows:

*To reduce the burden, you are only asked to provide information on one of your Opticians. Check the condition that applies to you.*

- **If you have two or more Opticians, then please complete the survey on your highest (lowest) performing Optician, meaning that Optician that performs tasks the best (least well), has the most (least) knowledge, or contributes the most (least) to the business. (Focusing on the lowest performing Optician will help the study identify areas for improvement.)** If all your Opticians perform the same, then simply pick one to base your survey responses.

- **If you only have one Optician, then please complete the survey on that Optician. If you are the only Optician, then please complete the survey on yourself.**

The survey collected information on the following topics:

1. The business itself (e.g., ownership, volume, sales, age, number of Opticians)
2. The credentials of the Optician (e.g., education, training, certificates and licenses, association memberships, continuing education, etc.)

3. How well the Optician performed the important tasks (list of 26 tasks rated on a 5-point scale for how well performed).

4. How much knowledge the Optician had (list of 20 knowledge areas rated on a 5-point scale for level of knowledge).

5. How much the Optician contributed financially to the business (list of 16 metrics of financial contribution such as number of various types of eyeglasses sold).

6. The management techniques used by the company (list of 15 best practices rated on a 5-point scale of extent used).

Appendix D contains a copy of the survey in Word. The Internet version contained the same content.

**Drawing the Sample and Administering the Survey**

Surveys were sent by e-mail to all the members of all the lists of the associations of the study sponsors (see list above). The invitations were sent by the association to increase the likely response rates and reduce the influence of spam filters. The total population sampled cannot be accurately estimated for a range of reasons, including uncertainties about the number of working e-mail addresses, the remaining potential influence of spam filters, the influence of respondents using work versus home e-mails, duplicate memberships across associations, and other factors.

The survey invitation explained the purpose of the study, described the sponsors, promised a report and Starbucks gift card for participation, and provided some instructions. See Appendix E for a copy of the invitation.
Results Found

Reading the Tables and Presentation

The results are reported in two formats. First, detailed statistical tables are provided in Appendix F. The tables include the actual questions asked in the survey, so they should be readily interpretable. The titles of the tables describe their content or purposes. They are in the same order as the survey. The tables both describe the overall sample and they show the differences between the high and low performing Opticians on each major factor (e.g., credentials, tasks performed, knowledge, and financial contributions). The tables also include the verbatim text of the written comments to the open-ended (fill-in) questions. The tables show the actual statistical results in great detail for the interested reader, but they do not include any interpretation of the findings.

Second, a Power Point presentation is provided in Appendix G. It attempts to summarize the primary findings in the form of a presentation that can be used to describe the results to audiences. It includes both some statistical results and narrative interpretations of the most central findings. It does not include all the detail available in the tables, however.

Strengths and Caveats When Interpreting the Results

The research design has several notable strengths:

- It is based on a large sample (n = about 3000 for most of the survey and 1500 for the financial indicators), which should ensure stable estimates of the statistical findings.
• We sent the survey to all available associations of Opticians (e.g., American Board of Opticianry, National Association of Optometrists and Opticians, National Contact Lens Examiners, Optician’s Association of America, etc.), thus attempting to be inclusive and representative of the entire profession. As such, the sample is likely to be representative of the range of Opticianry companies in the country and the results should generalize to the entire profession.

• Much of the data collected was objective (e.g., credentials, financial metrics, etc.).

• Supervisors were asked to look up the financial information if they did not know it off hand.

• The data were collected from the supervisors of the Opticians and thus are more likely to be honest and objective, and not subject to socially desirable responding that might occur if we asked Opticians to describe their performance and financial contributions.

• The supervisors were asked to describe actual employees who were their highest and lowest performers, rather than being asked their opinions about differences between high and low performers, thus the results should reflect real differences between Opticians and not opinions about potential differences.

However, several caveats should be kept in mind when interpreting the results:

• The response rate is uncertain because the total sample of people receiving the survey is unknown due inactive e-mail addresses, spam filters, etc.
• There is an unknown potential for response bias. For example, those more interested in the Opticianry career may have been more inclined to respond.

• The highest or lowest performing Optician working for a supervisor may not be considered a high or low performing Optician elsewhere. Supplementary analyses attempt to address this issue.

• The selection of the highest or lowest performing Optician was based on the judgment of the supervisor and may not be accurate. Again, supplementary analyses attempt to address this issue.

• Some of the data collected was subjective (e.g., ratings of task performance and knowledge level).

• Some of the supervisors estimated the financial data rather than looking it up.

• Some of the supervisors may not have fully understood the questions on the financial data and provided responses that appeared out of range (e.g., perhaps providing data for a year rather than a quarter or for the whole store rather than for the individual Optician). Because of this, some extreme values were eliminated from the dataset before analysis, and interpretation is based on medians rather than averages because medians are less distorted by extreme values. Also, a subgroup of industry experts (sponsors of the study) identified a subsample that had logical data and created financial productivity metrics. These metrics were used in supplementary analyses to provide another definition of high performing Opticians.

• Some of the results are based on small sample sizes and thus may not give stable estimates or provide powerful analyses. For example, relatively few
Opticians have certain types of certifications, licenses, or association memberships.

- All of the tasks and knowledge areas showed differences between high and low performers, so they only differ in the size of the differences.

Some Preliminary Observations

This section of the report summarizes some of the preliminary observations. It is not meant to be inclusive of all interpretations or the final interpretations that should be drawn. They are just intended to identify some of the highlights. These observations were also sent as a “Report to Participants” to all those who responded to the survey (see Appendix H).

There were a large number of participants in the survey:

- About 3000 responded to most sections.
- About 1500 responded to the financial indicators section.

The sample was representative of the range of types of Opticianry businesses:

- An independent optical business – three stores/offices or fewer owned by:
  - 11.8% Optician(s)
  - 23.2% Optometrist(s)
  - 12.9% Ophthalmologist(s)
- An independent optical business – more than three stores/offices owned by:
  - 3.1% Optician(s)
  - 4.6% Optometrist(s)
6.4% Ophthalmologist(s)
18.2% conventional chain (e.g., LensCrafters, Pearle Vision, National Vision)
2.2% department store (e.g., Sears, JC Penney, Macy’s)
17.5% mass merchandiser (e.g., Wal-Mart, Target, Shopko, Costco, Sam’s, BJ’s)

The sample was representative of the sizes of Opticianry businesses:

- Number of Opticians at each location: median of 3 (most 2 to 4)
- Approximate number of eyeglass or contact lens customers per year at each location: median of 2300 (most 1000 to 4500)
- Average sales price per eyeglass or contact lens customer at each location: median of $300 (most $200 to $400)
- Annual sales volume of eyeglass and contact lens business at each location:
  - 30.5% under $500,000
  - 36.2% $500,000 to $1,000,000
  - 16.7% $1,000,000 to $1,500,000
  - 7.2% $1,500,000 to $2,000,000
  - 9.3% over $2,000,000

The education of Opticians varies as follows:

- 29.4% high school only
- 40.0% some college (no degree)
- 19.7% Associates Degree (2 year) in Opticianry
- 12.2% Associates Degree (2 year) not in Opticianry
• 21.2% Bachelor’s Degree (4 year) not in Opticianry
• 2.8% Graduate Degree (6+ year) or higher not in Opticianry

More highly educated Opticians are more likely to be high performers:

• Opticians with Associates Degrees (2 year, in Opticianry) are 13.8% more likely to be high performers
• Opticians with Bachelors Degrees (4 year, not in Opticianry) are 13.2% more likely to be high performers
• Opticians with Graduate Degrees (6 year, not in Opticianry) are 21.4% more likely to be high performers
• Opticians with only high school or just some college are 7.5% to 16.6% less likely to be high performers

The training of Opticians varies as follows:

• 30.5% training programs held at academic institutions such as community and technical colleges
• 3.9% Department of Labor sponsored apprenticeship program
• 15.7% state sponsored apprenticeship program
• 7.3% instructor in an apprenticeship program
• 9.6% National Academy of Opticianry – Ophthalmic Career Progression Program (NAO – OCPP)
• 3.4% training by the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO)
• 5.9% training by the American Optometric Association (AOA) Paraoptometric Program
• 37.8% structured employer (in-house) training program
• 72.0% on-the-job training

More highly trained Opticians are more likely to be high performers:
• Opticians who attend training programs held at academic institutions such as community and technical colleges are 10.6% more likely to be high performers
• Opticians who are instructors in an apprenticeship program are 12.4% more likely to be high performers
• Opticians National Academy of Opticianry – Ophthalmic Career Progression Program (NAO – OCPP) are 14.6% more likely to be high performers
• Opticians who only attend on-the-job training are 4.6% less likely to be high performers

The certifications and licenses of Opticians vary as follows:
• 86.9% ABOC = American Board of Opticianry Certification
• 3.2% ABO–AC = American Board of Opticianry Advanced Certification
• 1.8% ABOM = American Board of Opticianry Master
• 2.4% CPC = Commission on Paraoptometric Certification
• 3.2% JCAHPO = Joint Commission on Allied Health Personnel in Ophthalmology
• 24.2% LDO = Licensed Dispensing Optician
• 35.5% NCLEC = National Contact Lens Examiners Certification
• 2.8% NCLE–AC = National Contact Lens Examiners Advanced Certification
• 0.2% NCLEM = National Contact Lens Examiners Master

Opticians with more certifications and licenses are more likely to be high performers:
• Opticians who have American Board of Opticianry Certification (ABOC) are 5% more likely to be high performers
• Opticians who are Licensed Dispensing Optician (LDO) are 8.8% more likely to be high performers
• Opticians who have National Contact Lens Examiners Certification (NCLEC) are 6.4% more likely to be high performers

The association memberships of Opticians vary as follows:
• National association membership
• 25.3% OAA = Opticians Association of America
• 19.8% NAO = National Academy of Opticianry
• 8.8% CLSA = Contact Lens Society of America
• Fellowships in membership associations
• 3.9% HFOAA = Honored Fellow Opticians Association of America
• 8.8% FNAO = Fellow of the National Academy of Opticianry
• 1.9% FCLSA = Fellow of the Contact Lens Society of America
• 49.3% State associations

Opticians that are members of associations are more likely to be high performers:
• Opticians who are members of the Opticians Association of America (OAA) are 15.6% more likely to be high performers
• Opticians who are members of the National Academy of Opticianry (NAO) are 9.2% more likely to be high performers
• Opticians who are members of a state association are 4.4% more likely to be high performers

The continuing education of Opticians varies as follows:
• Credits in last 3 years: median of 12 (most 5 to 21)
• Types of programs:
  • 44.6% webinar
  • 50.5% live in person
  • 36.9% convention
  • 45.4% print

Opticians with more continuing education are more likely to be high performers:
• High performers get more continuing education credits (average of 3 more)
• They are more likely to attend webinars, live in-person classes, and conventions

The financial contributions of Opticians are as follows (per Optician per 3 months, based on medians and interquartile ranges):
• # of Complete Pairs of eyewear sold = 179 (range 90-300)
• Average dollar value of Complete Pairs of eyewear sold = 312 (range 219-450)
• # of Lenses Only eyewear sold = 30 (range 15-75)
• Average dollar value of Lenses Only eyewear sold = 200 (range 140-300)
• # of Frames Only eyewear sold = 10 (range 3-25)
• Average dollar value of Frames Only eyewear sold = 150 (range 78-200)
• # of Contact Lens packages sold = 60 (range 7-183)
• Average dollar value of Contact Lens sold = 75 (range 30-180)
• # of productive (not training or administrative) hours worked = 400 (range 90-500)
• # of patient transactions involving the purchase of eyewear = 200 (range 60-350)
• # of patient transactions that resulted in the sale of multiple pairs in the same time period (30 days) = 20 (range 10-55)
• # of complete pairs and lenses-only jobs that included anti-reflective (AR) coating = 100 (range 50-200)
• # of complete pairs and lenses-only jobs that included photochromic lenses = 45 (range 20-100)
• # of plano sunglasses sold = 10 (range 3-25)
• # of prescription sunglasses sold = 30 (range 12-65)
• # of eyeglasses and contact lenses sold by the Optician that were returned due to the fault of the Optician (not doctor re-dos, warranties and guarantees, etc.) = 1 (range 0-5)
The additional financial contributions of high performing Opticians compared to low performing Opticians are (additional per Optician per 3 months, based on significant median differences):

- # of Complete Pairs of eyewear sold = 37
- # of Contact Lens packages sold = 15
- # of productive (not training or administrative) hours worked = 60
- # of patient transactions involving the purchase of eyewear = 11
- # of patient transactions that resulted in the sale of multiple pairs in the same time period (30 days) = 5
- # of complete pairs and lenses-only jobs that included anti-reflective (AR) coating = 18.5
- # of complete pairs and lenses-only jobs that included photochromic lense = 10
- # of prescription sunglasses sold = 10

In conclusion, the results show that there is a wide variation between Opticians on their credentials, job performance, and their financial contributions. Moreover, high performing Opticians tend to have more credential and make greater financial contributions to their companies.

**Supplementary Analyses and Observations**

As noted previously, some of the financial data appeared out of range, so a group of industry experts identified the subsample that had logical data and created financial productivity metrics, which were used in supplementary analyses to provide another definition of high performing Opticians. This analysis proceeded as follows:
- Established minimums and maximums for what Opticians could reasonably contribute within a 13-week period for each of the 16 financial indicators collected on the survey.
- Filtered the data based on these minimums and maximums and whether the Optician had complete data on all the indicators, which resulted in a subsample of 536 Opticians. This is about 45% of the overall sample that had financial information, but it is still large enough to have high statistical power to detect differences.
- Calculated performance for the following metrics:
  - Average dollar value per sale
  - Productivity in terms of sales dollars per hour worked
  - Percentage of multiple pair sales
  - Percentage of anti-reflective (AR) sales
  - Percentage of photochromic sales
  - Percentage of plano sunglasses sales
  - Percentage of prescription sunglasses sales
  - Percentage of remakes per sale
- Ranked the Opticians on each of these metrics (i.e., rank order out of 536). The rankings were all based on “higher is better”, with the exception of remakes, in which case “lower is better.”
- Add up rankings to calculate a composite score.
- Sort the Opticians by their composite scores.
- Define the top 50% as “financially high performing” Opticians and the bottom 50% as “financially low performing” Opticians. A 50/50 split is statistically optimal in the sense that it creates the maximum amount of statistical power to detect differences.

- The term “financially high performing” is an important distinction to the “high performing” optician term used throughout the rest of this report. In the first four sections of this report, high performing opticians were identified by their supervisor and their characteristics were studied. For the fifth section on financial performance, sales data was used as the primary indicator of financially high and low performing opticians. Characteristics of financially high and low performing opticians were then done. This difference is important because supervisors may have used more criteria other than financial performance when indicating high and low performing opticians. This is one reason why the characteristics of high and low performing opticians differ a bit from financially high and low performing opticians.

Table 18 shows the difference between high and low performing Opticians based on this definition in terms of the financial metrics above. The differences are large and likely to be accurate since all out of range values have been eliminated. As importantly, this defines high performance in terms of the financial metrics used by the industry, thus it may be more meaningful than the previous analyses of financial indicators. The main limitation of this definition of high performance is it does not factor in other possible causes of the financial indicators, such as the profitability of the store, the location and local market, and other opportunities to achieve high financial indicators.
The high and low performing Opticians based on their financial performance were then compared in terms of their credentials, task performance, and knowledge, replicating Tables 4, 7, and 9. These results are shown in table 19 to 21 in Appendix F. Preliminary observations on these results include:

- Overall, the findings are highly similar and confirming of the previous analyses. However, some findings are different as noted below.
- More training is related to being a high performing Optician, such as training at academic institutions, training in special programs like the NAO – OCPP and the JCAHPO, and training in state sponsored apprenticeship programs. However, the previous finding that Opticians who only attend on-the-job training are less likely to be high performers was not observed.
- More certifications is related to being a high performing Optician. In fact, the results show even stronger support with seven of nine certifications related to higher financial performance.
- More professional memberships is related to being a high performing Optician. Again, the results show even stronger support with six of seven association memberships related to higher financial performance.
- More continuing education of all types is again related to being a high performing Optician.
- High performing Opticians are rated as higher on job performance on all tasks and knowledge areas.
- The only results that are inconsistent are for education. Previously it was found that more highly educated Opticians were more likely to be high
performers. With this definition of high performers based on financial metrics, little consistent relationship is found except for graduate education. This may be due to the smaller sample or other unknown factors. However, it should also be noted that training programs held at academic institutions such as community and technical colleges was associated with high performers, which likely reflect 2-year degrees in Opticianry.

**INTERPRETATION OF THE RESULTS**

**Purpose**

The purpose of this report is to interpret the results of the study in terms of four major topics identified by the section headings below, and then to derive specific recommendations for each. The report will not repeat every finding, but will instead summarize the findings and refer the reader to other documents for details. The interpretations in this report draw on the author's experience as a researcher. It is intended to focus on “what matters” in terms of the practical uses of the results. It has the tone of an “executive briefing” intended to focus the attention of decision makers (e.g., leaders of the profession and business owners) on what the results mean for managing Opticians. The recommendations can also be used by individual Opticians to develop their own careers.

**Recommendations for Improving the Profession**

This section of the report addresses the question: What credentialing matters? Evolving professions face a fundamental tension. Practitioners of a profession want to
increase their status and income, which are often increased by credentials. Employers want an inexpensive supply of labor, which is made more difficult by credentialing. The key to resolving this tension is to show that the credentials pay off in terms of increased the contribution of the profession to the business. The findings of this study may be the first scientifically sound research evidence demonstrating the value of credentials that is independent of educational and other credentialing institutions. This study yielded insight into the value of five types of credentials: education, training, certifications and licenses, association memberships, and continuing education.

Opticians are fairly highly educated, with 70% having education beyond high school, and about 36% have Associate Degrees in Opticianry or higher. Although the supplemental results using the financial indicators do not show a consistent difference, the results of the primary study clearly show that higher levels of education are associated with being a high performing Optician, leading to the following recommendation.

**Recommendation 1:** Aspiring Opticians should seek higher levels of education and employers should seek to hire Opticians with higher levels of education. In particular, Associate Degrees in Opticianry, Bachelor Degrees in any field, and Graduate Degrees in any field are associated with higher performance. High school only is associated with lower job performance.

Opticians participate in a wide range of training programs, including primarily the following types: programs held at academic institutions, apprenticeship programs, programs offered by professional associations, structured employer programs, and on-the-job training. The results of the study clearly show that investments in training are associated with higher performing Opticians. However, the type of training program matters, leading to the following recommendation.
**Recommendation 2:** Opticians and their employers should invest in training, but the training associated with the greatest payoff in terms of higher job performance is programs held by academic institutions, apprenticeship programs, and participation in specialized training such as the National Academy of Opticianry Ophthalmic Career Progression Program. Other types of training are not clearly associated with higher job performance, and sole reliance on on-the-job training may be associated with lower job performance.

Note that some of the other types of training may also pay off, but were infrequent enough in the sample such that the study had limited ability to find a relationship with job performance. Also, although structured (in-house) training programs were not associated with higher job performance, they were not associated with lower performance either. So, they are better than just on-the-job training. Also, the effectiveness of in-house training depends on how they are designed. For example, they are likely to be more effective if they include classes at academic institutions (including online courses), apprenticeship programs, certifications, continuing education, and so on. Finally, the return-on-investment or “business case” must be considered. Degree programs and outside courses are more expensive than in-house training, and this study did not measure or consider the costs compared to the benefits of these types of training.

Most Opticians have certifications or licenses; 87% have American Board of Opticianry Certification, 24% are Licensed Dispensing Opticians, and 36% have National Contact Lens Examiners Certification. Most of the certifications are associated with being a high performing Optician, leading to the following recommendation.

**Recommendation 3:** Opticians should seek certifications and employers should hire Opticians with certifications. The two most common certifications are associated with higher job performance: American Board of Opticianry Certification and National Contact Lens Examiners Certification.
Although licensing was associated with high performing Opticians, this result cannot be used to recommend that Opticians seek licenses or organizations hire licensed Opticians because that is completely determined by the state in which you reside. If you are in a licensed state, you must be licensed to practice and you can only hire licensed Opticians. Moreover, the research design did not allow a comparison between licensed and non-licensed Opticians within the same state, thus the performance differences may be due to factors associated with the states rather than the license.

Also, as with training, some of the other types of certification and licenses may also pay off, but were infrequent enough in the sample such that the study had limited ability to find a relationship with job performance. This included the “advanced” certifications associated with those above and certifications provided by other organizations.

Many Opticians are members of professional associations, the most common of which are Opticians Association of America (25%), National Academy of Opticianry (20%), and state associations (49%). Membership in most professional associations tended to characterize higher performing Opticians to a greater degree, leading to the following recommendation.

**Recommendation 4:** Opticians should seek membership in profession associations, and employers should hire Opticians with professional memberships. All of the most common association memberships are associated with higher job performance: Opticians Association of America, National Academy of Opticianry, Contact Lens Society of America, and (to a small extent) state associations.
Again, some association memberships, including fellowships in the associations above, were fairly rare and thus could not be examined with as much certainty in the present study.

Continuing education is an important part of the development of Opticians, with the median number of credits being 12 in the last 3 years. All types of programs were common: webinars (45% of Opticians participating), live in-person (51%), conventions (37%), and print (45%). High performing Opticians took slightly more credits (about 3 more over 3 years), leading to the following recommendation:

*Recommendation 5: Opticians should seek and employers should sponsor continuing education credits.*

It is important to recognize that continuing education, as well as perhaps association membership, may occur after rather than before an Optician becomes a high performer. That is, high performers may be rewarded by allowing them to attend continuing education opportunities, as opposed to the continuing education necessarily making them high performers. Nevertheless, the evidence suggests that there is a payoff, which was heretofore not been demonstrated empirically.

**Recommendations for Improving the Job Performance of Opticians**

The research study showed that high performing Opticians perform all aspects of their job better than low performing Opticians. However, some tasks most distinguish high performing from low performing Opticians. As such, it is recommended that, in order to improve the job performance of Opticians, emphasis should be given to certain tasks. These tasks differ depending on whether the Optician is dispensing spectacles or contact lenses, as described in the recommendations below.
Recommendation 6: To increase the job performance of Opticians dispensing spectacles, emphasis should be given to tasks involving determining the patient’s needs, inspection, adjustments, and troubleshooting, in addition to explaining lens information and helping patients decide on choices.

Recommendation 7: To increase the job performance of Opticians dispensing contact lenses, emphasis should be given to tasks involving analyzing prescription information, verifying, assessing vision, conducting diagnostic evaluation, and educating patients on lens insertion, hygiene, cleaning, adaptive symptoms, etc., in addition to selecting lenses and designs and conducting follow-up visits.

Recommendation 8: To increase the job performance of Opticians dispensing spectacles and contact lenses, emphasis should be given to tasks involving planning and organizing, working without supervision, teamwork, and customer service, in addition to selling products and merchandising.

These recommendations are based on the logical findings that high performance is demonstrated by the more complex tasks in addition to the simpler tasks. Presumably, the complex tasks are more difficult to perform and thus more distinguish high performance.

Similarly, some knowledge areas most distinguish high performing from low performing Opticians. As such, it is recommended that, in order to improve the job performance of Opticians, emphasis should be given to developing knowledge in certain areas. These knowledge areas differ depending on whether the Optician is dispensing spectacles or contact lenses, as described in the recommendations below.

Recommendation 9: To increase the job performance of Opticians dispensing spectacles, emphasis should be given to developing knowledge of ophthalmic products, instrumentation, dispensing procedures, and ophthalmic optics, in addition to knowledge of ophthalmic formulas, principles of refraction, and ocular anatomy/physiology/pathology.

Recommendation 10: To increase the job performance of Opticians dispensing contact lenses, emphasis should be given to developing knowledge of refractive errors, optical conditions/terms/principles, dispensing, follow-up, legal
requirements, and ocular anatomy/physiology, in addition to fitting and instrumentation.

Here, the knowledge areas that most distinguish high performers are not necessarily the most complex for both jobs, but are those most relevant to the requirements of the job. For dispensing spectacles, high performance requires operational knowledge of products, instruments, and procedures, in addition to the scientific basics like formulas, principles, and physiology. For dispensing contact lenses, on the other hand, high performance may require somewhat more of the scientific basics like refractive errors and optical principles, as opposed to only fitting and dispensing knowledge.

An important caveat with these recommendations is that the lesser critical tasks and knowledge areas are not unimportant, but only somewhat less critical in terms of areas of emphasis for high performance. All the tasks and knowledge areas are important in an absolute sense. Also, the tasks and knowledge areas in the recommendations are only those that showed the most and least statistical differences between high and low performing Opticians, the full list of tasks and knowledge areas provided in the Technical Report should be used to train and develop the job performance of Opticians.

**Recommendations for Improving the Management Practices of Opticianry Businesses**

The study collected information on the management practices of Opticianry businesses. The practices were based on a review of the “best practices” (i.e., best management techniques) in the published research on employee management. The
survey respondents, who were the supervisors of the Opticians, described their businesses in terms of 15 best practices. The study analyzed both the extent to which these practices were used, but also which practices were correlated with the sales volume of the business, leading to the following recommendation.

**Recommendation 11:** To improve the job performance of Opticians and sales volume, businesses should adopt management best practices, such as: setting formal goals for Opticians for sales and productivity, holding performance feedback meetings, developing formal strategic plans for business growth, creating sales campaigns and using advertising, using financial sales incentives, and training beyond just on-the-job.

There are other management practices that are also important, and the reader should consult the full list in the Technical Report for details. These are merely the ones that showed the strongest relationship with sales volume.

There are two other important considerations when interpreting these results. First, these practices were more common in larger companies with more Opticians to manage. These practices may be more applicable and have a greater payoff in larger companies, or larger companies may simply be more sophisticated in their management practices. Nevertheless, most of these practices could be utilized by an Opticianry business of any size.

Second, these practices were more common in companies owned by Opticians rather than optometrists and ophthalmologists. This may be because the focus of the latter businesses is the medical services provided, and selling spectacles and contact lenses is a secondary service provided for the convenience of their customers. Optician-owned businesses, on the other hand, are focused primarily on selling
spectacles and contact lenses through the efforts of their Optician employees, thus
good Optician management is more important to their businesses.

Observations on Whether it is Worthwhile Financially to Invest in the

Development of Opticians

The study collected detailed information on the financial contributions of
Opticians. Given the large and representative sample, the results provide information
that is fairly generalizable across the industry. The first observation is that Opticians
contribute substantially to the financial success of the business. For example, the
median Optician (at the 50th percentile) sells 179 complete pairs of eyewear each three
months at an average value of $312 per pair. That is $55,848 in gross sales per three
months, or $223,392 per year. In addition, the median-level Optician sells 30 pairs of
lenses-only eyewear at an average value of $200, 10 frames-only eyewear at an
average value of $150, and 60 packages of contact lenses at an average value of $75
per three months. That is an additional $12,000 per three months, or $48,000 yearly.
That brings the total value of the products sold by the median Optician to $67,848 every
three months or $271,392 yearly.

The second observation is that a high performing Optician contributes
substantially more to the financial success of the business. The original financial
analysis showed that a high performing Optician sells an additional 37 pairs of complete
eyewear and an additional 15 packages of contact lenses each three months. That is
an additional $12,669 in financial contribution each three months or $50,676 yearly.
That is an increase of about 18.7% in additional sales from a high performing Optician.
Several caveats should be kept in mind when interpreting these findings. First, although respondents in the study were asked to look up the financial records, they were allowed to estimate these values and many did so. Thus, there is likely to be some degree of inaccuracy. Second, these are values for a single quarter for a single year (2nd quarter of 2014), which may not generalize to every year. Third, these values do not reflect the sole contribution of the individual Optician, but also the efforts of others in the organization that make the business possible (e.g., optometrists, managers, support staff, corporate staff, etc.). Fourth, high performing Opticians tend to work more hours, which partly accounts for their greater productivity. They work an additional 60 hours per three months, which is 15% more than the median of 400 hours, which is roughly equivalent to their additional sales productivity (of 18.7%). This makes interpretation somewhat difficult. Do high performing Opticians contribute more simply because they work more hours, or are they asked to work more hours because they are better Opticians? Even if their productivity per hour is not higher, it is clear that they are substantially greater contributors to the financial success of the organization.

The supplemental financial analyses clarified the latter issue by refining the dataset so that productivity of high performing Opticians could be examined per sale and per hour. The supplemental financial analysis showed that a high performing Optician has an average sale that is $110 (37%) greater and sells $84 (46%) more per hour. Although this financial analysis also has its limitations, most notably that it does not control for the profitability of the store and market conditions, it nevertheless provides confirmatory evidence of the financial value of investing in Opticians.

These results lead to the following recommendation:
**Recommendation 12**: Opticianry businesses should invest in the development of the job performance of Opticians because there is a clear financial payoff from doing so.

**Conclusion**

The strengths and weaknesses of the study are described in detail in the Technical Report. Although there are many limitations of field research where controlled experimentation is not possible, this study utilized research design features that had many strengths, especially compared to the typical field study. As such, the findings are likely to be accurate and replicable, and there should be confidence in using the recommendations deriving from the results.

Furthermore, there is very little existing research (if any) addressing the questions examined in this study. The recommendations deriving from this research, as captured in this report, should address the primary goals of this project – to develop the contributions of Opticians to their businesses and the profession of Opticianry.
Appendices

A. Meeting Agenda
B. Meeting Handouts
C. Meeting Notes
D. Survey
E. Invitation Letter
F. Tables
G. Presentation
H. Report to Participants