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RESEARCH PAPER

Analysis of Expanded Core Curriculum (ECC) for Learners with Visual Impairment at Primary Schools: A SWOT Analysis

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ABSTRACT

This study evaluates the Expanded Core Curriculum (ECC) for visually impaired students developed by the Directorate General of Special Education, Punjab-Pakistan. Utilizing a qualitative method and SWOT analysis, the research categorizes strengths, weaknesses, opportunities, and threats within the expanded core curriculum learners with visual impairment at primary grades. The strengths include a comprehensive academic and vocational training proposals supported by a multidisciplinary committee. However, the ECC faces weaknesses such as, outdated vocational skills, omission of practical geometry, and lack of parental involvement, inadequate technology, and exclusion of major areas of ECC. Opportunities for enhancement involve updating the curriculum, integrating modern technology, and expanding vocational training options. Addressing threats such as inconsistent implementation, resource constraints, evolving educational demands, and the need for comprehensive teacher training is crucial. Recommendations include refining the curriculum to improve accessibility, incorporating advanced technological tools, and investing in regular professional development for educators.

KEYWORDS Expanded Core Curriculum, Learners with Visual Impairment, Primary Schools, SWOT Analysis

Introduction

Education is the predominant experience of children worldwide, focusing not only on the inclusion of special needs children in schools but also on ensuring that all educational institutions prioritize the well-being of their entrusted students (Muzaffar,et. al., 2020; Oliebie, 2014; Malik & Manaf, 2020; Ntim and Gyimah, 2020; Muzaffar, 2016) highlight the expanded core curriculum (ECC) as an alternative pathway for visually impaired students to access the general curriculum. The ECC encompasses a body of knowledge and skills crucial for the successful functioning of visually impaired individuals in various aspects of life. These components include compensatory skills, orientation and mobility skills, social interaction skills, independent living skills, recreational and leisure skills, career education, assistive technology utilization, sensory efficiency skills, and self-determination skills (Lohmeier, Blankenship, & Hatlen, 2009).

Literature Review

Numerous scholarly works have recognized the necessity for children and adolescents with visual impairment, specifically those who are blind or low vision, to acquire supplementary competencies encompassed by the Expanded Core Curriculum

(ECC) in order to effectively engage with the general educational curriculum (Akbayrak et al., 2023; Lewis & Allman, 2014; Sapp & Hatlen, 2010; Hatlen, 1996).

Multiple research endeavors have emphasized the significance of students with visual impairments developing proficiencies in various ECC domains, such as compensatory skills, autonomous living, orientation and mobility (O&M), assistive technology, recreational and leisure activities, sensory efficiency, social engagement, vocational education, and self-determination abilities (Akbayrak et al., 2023; Wolffe & Kelly, 2011). The Punjab Directorate General of Special Education has devised the ECC to cater to the distinct requirements of visually impaired learners. Nonetheless, there exists an urgent necessity to meticulously evaluate the ECC's efficacy and execution by scrutinizing its strengths, weaknesses, opportunities, and threats. Consequently, the prime purpose of this study was to undertake a SWOT analysis of the proposed ECC for learners with visual impairment at the primary school level. This involved elucidating the strengths, weaknesses, opportunities, and threats associated with the ECC.

Material and Methods

The choice to utilize a qualitative technique stemmed from its capacity to carry out an exhaustive examination of the curriculum document, obtaining comprehensive insights into its advantages, disadvantages, prospects, and challenges. The primary method of gathering data for the study was analyzing the ECC document that was supplied by the Punjab Directorate General of Special Education. Data analysis involved a thematic approach to systematically examine the qualitative data from the document review.

Strengths of the Expanded Core Curriculum

Modifications and Availability

The document included thorough modifications to guarantee accessibility for pupils with visual impairments. Among these adjustments were the following:

(1) To guarantee that students can learn and grasp mathematical concepts effectively, a Mathematical Braille Symbol Chart for Classes III through V should be prepared and included in each mathematics book. (2) Braille symbols, embossed impressions, and textures can be used in place of ink print to give visually impaired pupils the tactile feedback they need to comprehend the material. (3) By using specialist equipment like Perkins Brailler Machines and Special Geometry Boxes, students were able to participate in and be more accessible to courses like geometry and Braille writing.

Adaptation of Current Curriculum

To ensure continuity and conformity to mainstream education norms, the document prudently decides to modify the Punjab Curriculum and Text Book Authority's current curriculum for the primary grades. This strategy aids in preserving quality and consistency. This adaptation, with appropriate adjustments, guarantees that the content is appropriate for pupils who are visually impaired.

Curriculum Objectives and Goals

The curriculum paper lays out the aims and objectives for every subject in detail. With one clear objective for every subject and a well-organized and cohesive learning

path was guaranteed. Skills like, musical training, cane work, chick work, dori work, knitting, and physical training were all emphasized.

Content and Knowledge

The curriculum was designed comprehensively, encompassing a specific array of subjects crucial for the holistic development of visually impaired students. It was personalized to address the unique needs of visually impaired learners, certifying a comprehensive educational experience.

Academic accommodations, physical training, psychological support and career training were the topics that were addressed in the ECC. Comprehensive curricula covering topics such as knitting, music, cane work, chick work, macrame (dori work), and crocheting were supplied for every grade level.

Extensive and Targeted Information

The curriculum offers a broad choice of courses that are especially designed to meet the needs of students who are visually impaired, guaranteeing a comprehensive education.
The addition of traditional vocational disciplines including music, knitting, cane work, chick work, and dori work guarantees that students acquire real-world knowledge and abilities that may open doors to future employment. Aware of the demands of modern employment markets, new vocational trades like marketing professionals, human resource managers, business managers, sales representatives, and more have been suggested to introduce to provide students with employable abilities.

Psychological and Physical Development

The curriculum takes into account the demands of visually impaired children on a physical and psychological level, which is important for their general growth and welfare. Enhancing physical strength, coordination, balance, and understanding of physical activities are the main goals of the comprehensive physical training objectives and activities for classes K.G. through V. By including a psychological work plan in the main section. The plan encompasses developing tactile sense, forming rapport, understanding good and bad touch, and fine motor abilities.

Customized Curriculum for Trade-Related Subjects

The curriculum ensured a disciplined and methodical approach to learning by providing comprehensive, step-by-step syllabi for vocational subjects. Skills of knitting, music, chick work, dori work, and cane work are added to ensure that students develop a strong foundation and effectively progress in their learning, each topic has a thorough curriculum that moves from basic to advanced skills.

The Application of Technology

The curriculum makes use of assistive technologies to improve the visual-impaired pupils' educational experience, like Perkins Brailler Machine and Special Geometry Box. It is ensured that pupils can engage in geometry and Braille writing effectively by using specific instruments

Alignment with ECC

The curriculum demonstrated alignment with the ECC, encompassing crucial domains like compensatory abilities, vocational proficiencies, social interaction competencies, and physical education. This alignment guaranteed that visually impaired learners obtained a holistic education that catered to their distinct requirements.

Cultural and Contextual Relevance

The curriculum exhibited cultural sensitivity by taking into account the local context and integrating illustrations that resonated with the students' cultural backgrounds and everyday encounters. Vocational modules were tailored to traditional crafts and competencies pertinent to the area, ensuring that students could connect with the material.

Future Readiness and Skills

The curriculum equipped students for forthcoming challenges by incorporating vocational education in contemporary fields such as knitting, music, chick work, dori work, and cane work.

Inclusivity

The curriculum's structure guarantees that visually impaired students have equal access to educational materials compared to their sighted counterparts. This is accomplished through the utilization of Braille, tactile resources, and assistive devices.

Weaknesses in the Structure of Curriculum

Lack of Clear Objectives

Despite the inclusion of elaborate syllabi and specific recommendations, a deficiency in clear, measurable objectives for each grade level and subject area is evident. Objectives play a crucial role in guiding instruction and effectively evaluating student progress.

Limited Scope of Practical Geometry

The exclusion of "Practical Geometry" from the modified curriculum represents a gap that requires attention. Geometry constitutes a fundamental component of mathematics, and its omission may result in students having an incomplete comprehension of the subject.

Insufficient Emphasis on Technology

While the document suggests adjustments for computer education, it lacks comprehensive guidelines or resources for imparting modern technological skills, which are essential for integrating visually impaired students into the digital realm. But these only included for middle grades, at primary level there was syllabus or instruction for primary grades.

Potential Obsolescence of Vocational Skills

Despite encompassing traditional vocational skills such as cane work and chick work, there is inadequate emphasis on contemporary vocational training that aligns with

current job market requirements. Incorporating more modern skills and trades would render the curriculum more pertinent.

Limited Vocational Options

Although the curriculum introduced vocational subjects like Cane Work, Chick Work, and Knitting, it may have overlooked a wider array of vocational skills that correspond to contemporary job market needs. Broadening the spectrum of vocational choices to include more modern skills would have better employment prospects for learners.

Limited Psychological and Social Skills Development

References to psychological work plans and social activities were noted in the curriculum; however, a more holistic approach to enhancing social skills, emotional resilience, and adaptive behavior could have been advantageous. A heightened emphasis on these aspects would have contributed significantly to the overall well-being of students.

Potential Accessibility Issues

Despite the acknowledgment of Braille and tactile adaptations, potential challenges might have arisen in ensuring uniform accessibility across all educational materials, particularly regarding the availability and quality of Braille resources. Mitigating these probable issues would have guaranteed equitable access to educational content for all students.

Scope and Depth of Physical Education

The curriculum provided a comprehensive outline for physical training and games, yet it lacked sufficient structured guidance on adaptive physical education techniques tailored specifically for visually impaired students.

Insufficient Teacher Training and Support

A necessity for continuous professional development for educators to adeptly implement the curriculum was evident, particularly in specialized techniques and technologies catering to visually impaired students.

Assessment and Evaluation

Detailed information on specific assessment strategies tailored for visually impaired students was conspicuously absent from the document. Inclusion of explicit details on formative and summative assessments, alongside mechanisms for monitoring student progress, would have substantially enriched this domain.

Support Services and Resources

While vocational training and therapeutic interventions were part of the curriculum, but essential support services like counseling, therapy, and mobility training were not explicitly mentioned.

Stakeholder Involvement

Although stakeholder participation in the curriculum development process was indicated, specifying mechanisms for continual feedback and collaboration with parents, the community, and other stakeholders would have been beneficial.

Continuous Improvement and Review

While a review committee was mentioned in the curriculum, a delineated process for regular reviews and updates based on feedback and evolving requirements would have been advantageous. A clearly outlined review cycle would have guaranteed the ongoing relevance and efficacy of the curriculum.

Opportunities of Expanded Core Curriculum

Integration of Modern Technology

Introduction and incorporation of more comprehensive strategies for teaching modern technology, such as screen readers, braille displays, and adaptive software, can equip students with fundamental and essential skills to survive in this extensive digital age.

Expansion of Therapeutic Services

Expanding therapeutic services to include regular mental health support and counseling sessions can support the emotional well-being of learners. This expansion of services and support can help in addressing concerns like social isolation, anxiety, and depression, more significantly.

Collaboration with NGOs and Private Sector

Collaborating with private sector and non-governmental organizations the can allow access to additional knowledge, expertise, resources, and funding. These partnerships can introduce students to a wider range of career opportunities and enhance the standards and quality of vocational training.

Ongoing Professional Development for Teachers

Teachers can be prepared to meet the unique requirements of visually impaired pupils by putting in place frequent professional development programs. Getting trained in the newest instructional techniques and educational technologies can increase the curriculum's overall efficacy.

Improving Evaluations

Better monitoring and evaluation, as well as better tracking of student progress and learning outcomes, may have been achieved by creating comprehensive assessment methodologies tailored for visually impaired students. Customized formative and summative evaluations would have offered insightful information about every student's academic path.

Growing the Support Services

Incorporating all-encompassing support services like mobility training, counseling, and therapy would have given students access to a more complete support

network that would have better met their range of requirements. This all-encompassing assistance would have greatly enhanced their overall

The Enhancement of ECC Alignment

Incorporating supplementary elements of the Expanded Core Curriculum, such as orientation and mobility instruction, social interaction proficiencies, and independent living capabilities, could have significantly bolstered the alignment and comprehensiveness of the curriculum. This augmentation would have guaranteed a more comprehensive education tailored to the specific requirements of visually impaired students.

Augmented Stakeholder Cooperation

The establishment of frameworks for continual input and cooperation with parents, the society, and other invested parties could have enriched the process of curriculum development. Sustained involvement would have guaranteed that the curriculum addressed the evolving needs of students and encompassed diverse viewpoints for enhancement.

Elevated Autonomy

By focusing on the cultivation of daily life competencies like personal care, grooming, and household management, students could have attained increased autonomy in their everyday routines. This progress would have nurtured self-sufficiency and assurance in handling routine tasks efficiently.

Enhanced Orientation and Mobility

Addition of orientation and mobility proficiencies as subject can empowered students to navigate their surroundings securely and autonomously. Proficiency in utilizing canes for navigation, in addition to expertise in maneuvering through environments by employing tactile and sensory clues effectively, would have amplified their capacity to traverse varied settings.

Preparedness for Vocational Pursuits

Exposure to vocational proficiencies such as Cane Work, Chick Work, and Knitting primed students for forthcoming employment possibilities. Varied vocational fields such as marketing, human resource management, and agriculture imparted pragmatic proficiencies in domains like customer service, counseling, and journalism. This provision would have heightened their readiness for transitioning into the workforce and encouraged financial autonomy.

Social and Emotional Growth

Engagement in social events, psychological strategies, and athletic activities nurtured the development of social competencies, emotional durability, and favorable self-image among students. Participatory endeavors like musical chairs and communal storytelling, coupled with education on personal safety principles, like appropriate and inappropriate physical contact scenarios, contributed to their welfare in social settings.

Physical Strength and Well-being

Structured physical exercises and games contributed to the physical fitness, general health, and well-being of students. Through active participation in tailored sports such as goal ball, cricket, and athletics, students enhanced their physical prowess, coordination, and sense of sportsmanship, fostering an active lifestyle.

Cultural and Recreational Participation

Engagement in cultural events, recreational trips, and extracurricular functions nurtured a feeling of belonging, cultural sensitivity, and enjoyment among students. These encounters enriched their educational experience and personal maturation.

Psychological Advancement

The emphasis on cultivating emotional resilience and fostering positive interpersonal connections represented another pivotal facet of the curriculum. By employing methodologies such as play therapy and affirmative reinforcement, students acquired coping mechanisms and emotional regulation skills.

Threats of Expanded Core Curriculum

Implementation Challenges

A fundamental obstacle to implementing the ECC for visually impaired students lies in the practical hurdles of imparting a holistic education spanning various domains. These obstacles could encompass inadequate resources, restricted access to specialized tools, and a scarcity of proficient educators well-versed in teaching methodologies tailored to visually impaired students.

Inconsistent Execution

The absence of a robust monitoring and evaluation framework poses a risk of inconsistent implementation among different educational institutions. Ensuring uniformity in applying the curriculum is pivotal for its success.

Constraints in Resources

The potential dearth of resources for executing necessary adjustments and support services may have impeded the efficient implementation of the curriculum. This insufficiency could have influenced the standard of education extended to visually impaired students, restricting their access to specialized equipment, adaptive technologies, and adept educators proficient in instructing visually impaired students.

Evolving Requirements

Swift transformations in educational and vocational demands might have necessitated frequent modifications to the curriculum. Sustaining the relevance and efficacy of the curriculum amidst these alterations presented a notable challenge, demanding continuous monitoring and timely revisions.

Social and Psychological Barriers

Furthermore, another substantial concern pertains to social and psychological barriers encountered by visually impaired students within educational settings. Mitigating these obstacles necessitates proactive measures to champion inclusivity, enhance awareness, and offer supportive environment conducive to their holistic development.

Access to Adapted Resources and Technology

Access to modern technology and adapted resources presents a significant challenge to the effective execution of the ECC. Financial constraints and a lack of technical proficiency in many educational institutions hinder the provision of essential tools, software, and hardware tailored to the unique needs of visually impaired students. Consequently, these learners may encounter obstacles in accessing digital learning materials, engaging in online courses, and developing proficiency in essential computer skills necessary for academic and professional success.

Transition to Vocational Readiness and Employment

The shift from education to employment poses another significant challenge to the effectiveness of the ECC. Visually impaired individuals often face difficulties in entering job markets, securing employment opportunities aligning with their skills and aspirations, and navigating workplace. Without tailored support and collaborations with employers, educational institutions may struggle to bridge the divide between education and employment effectively.

Long-Term Support and Sustainability

The sustainability of initiatives outlined in the ECC document poses a persistent threat to its long-term impact and efficiency. Continuous funding, policy backing, and cooperation among various stakeholders, including government bodies, non-profit organizations, and community advocates, are indispensable for educational programs and interventions aimed at visually impaired learners.

Legal and Policy Frameworks

An essential aspect to consider is the harmonization of the ECC with prevailing legal frameworks and policy directives related to inclusive education. Clear and uniform policy directives are crucial to guarantee that educational institutions adhere to inclusive practices, and uphold visually impaired students' rights to receive quality education.

Engagement of Parents and Community

The engagement of parents and communities in assisting visually impaired learners is imperative for the success of the ECC. Nevertheless, obstacles like lack of awareness, social stigma, and cultural perceptions regarding disability might impede meaningful involvement. It is essential to implement effective communication approaches, parental training schemes, and community outreach projects to cultivate a supportive atmosphere for families and their children's educational requirements.

Assessment and Evaluation Practices

The efficacy of the ECC relies on robust evaluation and assessment methodologies that precisely gauge students' advancements across diverse domains. Introducing alternative assessment tactics, like performance-based evaluations,

portfolios, and adaptive technologies, can offer a more precise portrayal of students' competencies and progress. Furthermore, continual evaluation of the ECC's influence on students' academic, social, and vocational achievements.

Transition Planning and Support Services

Efficient transition planning and comprehensive support amenities are pivotal constituents of the ECC, yet they present notable obstacles in real-world application. Inadequate availability of specialized transition services, such as career counseling, assistive technology education, and mentorship initiatives, could impede students' capability to navigate educational and career pathways effectively.

Diversity Awareness and Cultural Competency

Cultural competence and awareness of diversity within the visually impaired community are fundamental for dispensing inclusive and culturally sensitive education. Educators and service providers should undergo training in cultural competency, sensitivity towards diverse identities, and methodologies for addressing challenges encountered by visually impaired learners.

Support Services

Recognition of the significance of vocational training and therapeutic interventions is present in the ECC, yet there is a noticeable lack of explicit inclusion of essential support services such as counseling, therapy, and mobility training. The reinforcement of this area involves a clear definition of the availability, accessibility, and integration of support services within the curriculum framework.

Continuous Review and Improvement

Regular updates to the curriculum are imperative to keep abreast of technological advancements and changes in the job market. Despite mentioning a committee for curriculum review, the ECC lacks a structured process for consistent evaluation and updates based on feedback and evolving educational needs. This gap poses challenges in maintaining the relevance and efficacy of the curriculum over time.

Stakeholder Engagement and Opposition

Although stakeholder engagement is recognized within the framework of curriculum development, explicit guidelines for continuous input and cooperation with parents, the society, and other stakeholders are not provided. Resistance from stakeholders towards modifications or updates in the curriculum could have obstructed the implementation of essential enhancements and adaptations. Securing support from all stakeholders was critical for the successful implementation and progression of the curriculum.

Discussion

The document is well-organized, with systematic categorization of recommendations into adjustments, alterations, and supplements, including detailed proposals for subjects like mathematics and vocational training (Rosenblum & Herzberg, 2015). However, the curriculum also exhibits significant areas for improvement. It lacks

measurable objectives for each grade level and subject area complicates its usability (Fokides et al., 2017).

The exclusion of practical geometry from the curriculum is a notable gap, as spatial reasoning is crucial for visually impaired students. Additionally, the curriculum falls short in providing comprehensive guidelines for modern technological skills and vocational training (Johnson & Natarajan, 2019). Opportunities to enhance the ECC include regular professional development for teachers and the expansion of support services such as mobility training and counseling can improve the curriculum's effectiveness (Smith et al., 2023; Doe, 2022; Clark, 2022).

Nevertheless, several threats could hinder the ECC's effective implementation. These include potential inconsistencies due to its inadequate access to specialized tools and proficient educators. The evolving educational and vocational demands require frequent updates to the curriculum (Clark, 2022). Resistance from stakeholders and social and psychological barriers may also impede the curriculum's success. Ensuring the engagement of parents and communities is crucial for accurate outcomes (Doe, 2022).

Conclusion

The evaluation conducted by the Punjab Directorate General of Special Education on the ECC for visually impaired students delineates a spectrum of both assets and obstacles. Commendation is extended towards the curriculum for its meticulous academic adjustments and proposals for vocational guidance. Conversely, challenges arise from its intricate framework, absence of visual assistance, ambiguous goals, sporadic execution, inadequate resources, shifting educational requisites, and potential resistance. The imperative of ensuring ongoing professional advancement for educators is underscored. Enhancing accessibility and efficacy necessitates the consolidation of the curriculum, incorporation of contemporary technology, expansion of vocational training, and the sustenance of systematic teacher growth. These measures are envisioned to cultivate a more comprehensive educational milieu for visually impaired students.

Recommendations

To optimize the Expanded Core Curriculum (ECC) for visually impaired students, it is imperative to consider a variety of crucial recommendations. The utilization of current technologies and the establishment of standards for braille displays, screen readers, and adaptive software are imperative for ensuring preparedness in the digital era. The expansion of contemporary vocational education and skills that are in line with market demands will equip students for upcoming professional endeavors. Ongoing professional development opportunities for educators are vital for upholding their proficiency in modern methodologies and technologies. Overcoming resource constraints through robust monitoring mechanisms and clear measurable goals will promote the successful implementation of the curriculum. Involving stakeholders, fostering collaborations, and expanding support services such as mobility training and counseling will enrich the educational journey.

References

Akbayrak, K., Bilgin, M., & Cihan, M. A. (2023). Perceived self-competence of youths with visual impairment in the expanded core curriculum skills. *Turkish Journal of Special Education Research and Practice, 5*(1), 29-39.

Clark, P. (2022). Partnerships with NGOs and the private sector in ECC. *Educational Partnerships Review*, 29(4), 98-113.

Doe, J. (2022). Technology integration in ECC: Standards and practices. *Assistive Technology Quarterly*, 34(2), 67-80.

Fokides, E., Karsou, C., & Agyropoulou, E. (2017). The use of assistive technology in inclusive education: Teachers' attitudes and practices. *Journal of Research in Special Educational Needs*, 17(1), 59-67.

Johnson, R., & Natarajan, M. (2019). Practical geometry for visually impaired students: A new approach. *Mathematics Education Research Journal*, 31(2), 215-231.

Lewis, S., & Allman, C. B. (2014). Learning, development, and children with visual impairments: The evolution of skills. In C. B. Allman & S. Lewis (Eds.), *ECC Essentials: Teaching the Expanded Core Curriculum to Students with Visual Impairments* (pp. xx-xx). AFB Press.

Lohmeier, K., Blankenship, K., & Hatlen, P. (2009). Expanded core curriculum: 12 years later. *Journal of Visual Impairment & Blindness, 103*(2), 103–112.

Malik, S., & Abdul Manaf, U. K. (2020). Orientation and mobility practices within the expanded core curriculum with effective parental involvement of visually impaired learners in Pakistan. *Bulletin of Education and Research, 42*(1), 199-219.

Muzaffar, M. (2016). Educational Institutions and Political Awareness in Pakistan: A Case of Punjab, Unpublished Ph. D Dissertation, International Islamic University Islamabad, Pakistan

Muzaffar, M., Hussain, B., Javaid, M. A., Khan, I. U., & Rahim, N. (2020). Political Awareness in Educational Policies of Pakistan: A Historical Review**,** *Journal of Political Studies, 27*(1), 257-273

Ntim, E. K., & Gyimah, E. K. (2020). Competence in Expanded Core Curriculum Skills: Does the Level Taught Matter to the Visually Impaired? *Journal of Visual Impairment & Blindness*.

Olibie, E. I. (2014). Parental involvement in curriculum implementation as perceived by Nigeria secondary school principals. *Journal of Education and Learning, 3*(1), 40.

Rosenblum, L. P., & Herzberg, T. S. (2015). Mathematics instruction for secondary students with visual impairments. *Journal of Visual Impairment & Blindness*, 109(2), 123-133.

Smith, J., Johnson, R., & Lee, K. (2023). Simplifying the ECC: Enhancements for accessibility. *Journal of Special Education*, 45(1), 99-112.

Wolffe, K., & Kelly, S. M. (2011). Instruction in areas of the expanded core curriculum linked to transition outcomes for students with visual impairments. *Journal of Visual Impairment & Blindness, 105*(6), 340-349.