

## **Exploratory Data Analysis of the Yearly Data of the Brothers of the Christian Schools from 2003 to 2021**

Abel Sekone, FSC, MS<sup>1</sup>

### **Introduction**

As the Second Vatican Council was coming to its conclusion in 1965, there was almost a spirit of euphoria all around the world among many members of Religious Congregations of the Roman Catholic Church. The good Pope John XXIII had thrown open the windows of the Church, and the Spirit was transforming the face of the earth vis-à-vis the new reality of a world transformed against the backdrop of two world wars in the first half of the twentieth century that had ravaged much of Europe and parts of Asia and North Africa. The Council enunciated a vision of the People of God in terms of the universal call to holiness<sup>2</sup>; and a hopeful enthusiasm for this vision was reflected among the Brothers of the Christian Schools in the remarkable *Declaration* of 1967,<sup>3</sup> which was the product of the great renewal General Chapter of the Institute (1966-1967).

However, it didn't take too long before warning bells started going off; a rapid decline of vocations to the Religious Life was in evidence. Jesuit Raymond Hostie published a sobering monograph in France in 1972, the English title of which is *The Life and Death of Religious Orders: A Psycho-Sociological Approach*.<sup>4</sup> He stated, "We hold to our theory: the complete life cycle of a religious institution is about 300 years . . . ."<sup>5</sup> A few years later, Marianist Lawrence Cada and his associates wrote about the ever-growing imperative to revitalize Religious Life.<sup>6</sup> The then director of novices of the Brothers of the Christian Schools in North America cautioned, "Those among us who are naively hopeful about the future have reason to worry. Our future is not assured. There is a certain bleakness about it. On the other hand, those who say that all is bleak, that we have no future, and that we are all but dead, are likely mistaken."<sup>7</sup>

In articulating a vision of the People of God who are all called to holiness and in failing to specify the unique identity and contribution of Religious Life within the lay state, the Council left many Religious, and among them many Brothers of the Christian Schools, while euphoric in terms of the vision of the Church in the modern world, adrift and wondering "is the vocation of the Brother still necessary?"

It took some years before a few wise and articulate voices, who were themselves vowed Religious, began to articulate, for the Roman Catholic Church, a vision and a specificity for Religious Life within the lay vocation.<sup>8</sup> But it wasn't until 1996 that the Roman Catholic Church itself finally presented a bold vision of Religious Life for today within the lay vocation of all believers and as complementary to the clerical vocation.<sup>9</sup> This, however, is not the focus – but it is the context – of the present study. Our study here – by fast-forwarding to our present reality – focuses on the period between 2003 and 2021 and concerns itself only with a numerical consideration of what's been happening with only one group, the Institute of the Brothers of the Christian Schools. We are

interested in an Exploratory Data Analysis (EDA) of the data contained in the yearly statistics published by the Secretariat of the Institute of the Brothers of the Christian Schools.

## Research Project

The Secretariat of the Institute publishes statistics at the end of every year in December. The annual survey results help evaluate the life of the Institute in terms of the Brothers, their mission in various educational works, and their collaboration with lay partners and other non-FSC collaborators.

Firstly, we performed data wrangling from the various Word and Excel files to get cleaned datasets ready for analysis. Additionally, we realized an exploratory data analysis to discover trends and correlations in the data. We used the statistical programming language R-Studio to carry out our analytical work. The various variables do not have data points every year, and so the missing data points will be pictured in the visualizations showing curves with gaps for years when data was not collected for the given variable.

We then made a few interpretations and conclusions based on the results of our analysis with not too much focus on the reasons behind the results.

### 1. Evolution of the number of Brothers over the years from 2002

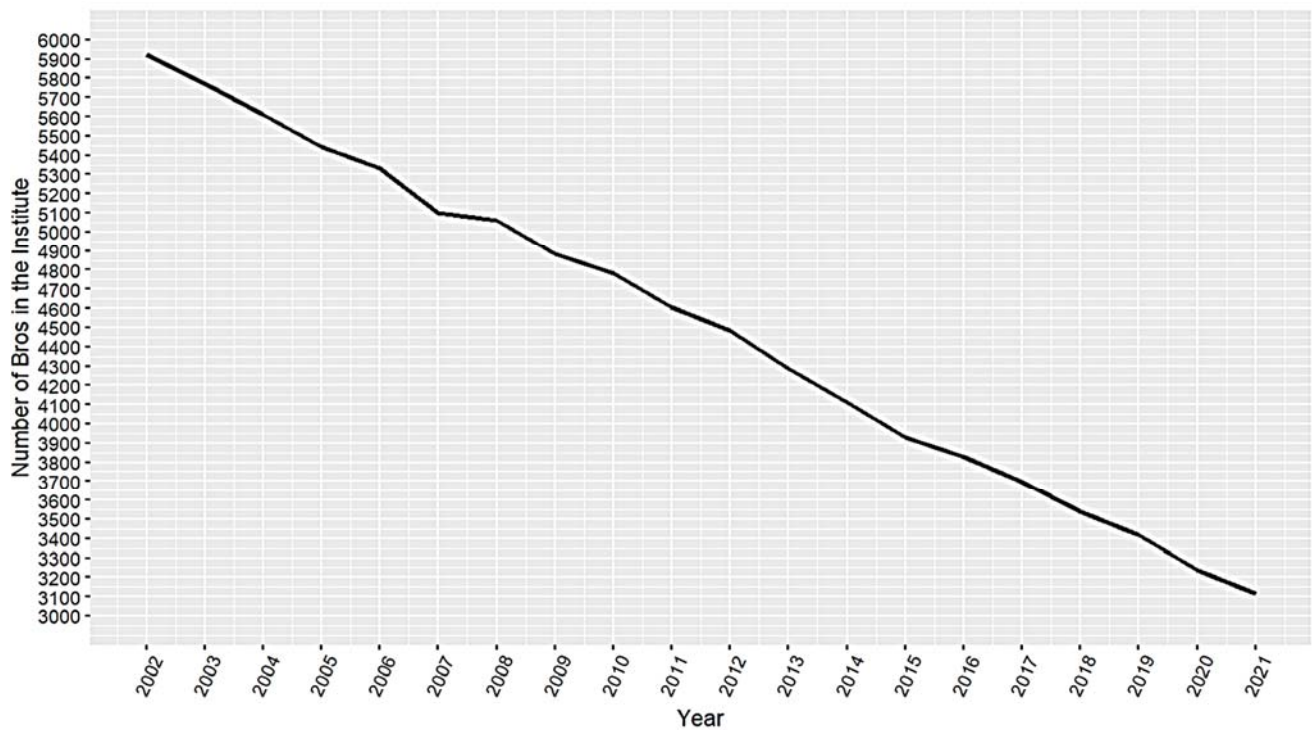


Figure 1: Evolution of the number of Brother over recent years

The number of Brothers has been decreasing over the years. Running a Linear Regression to find the relationship between Year and Number of Brothers we find that:

$$\text{Number of Brothers} = -148 \times \text{Year} + 302,126.$$

From our model, the number of Brothers is decreasing by 148 every year; and if nothing is done to change the slope of the curve, the Institute might not survive until 2041, i.e. in the next 20 years. However, there is hope and the Holy Spirit is still at work.

## 2. Evolution of the average age of Brothers over the years from 2002

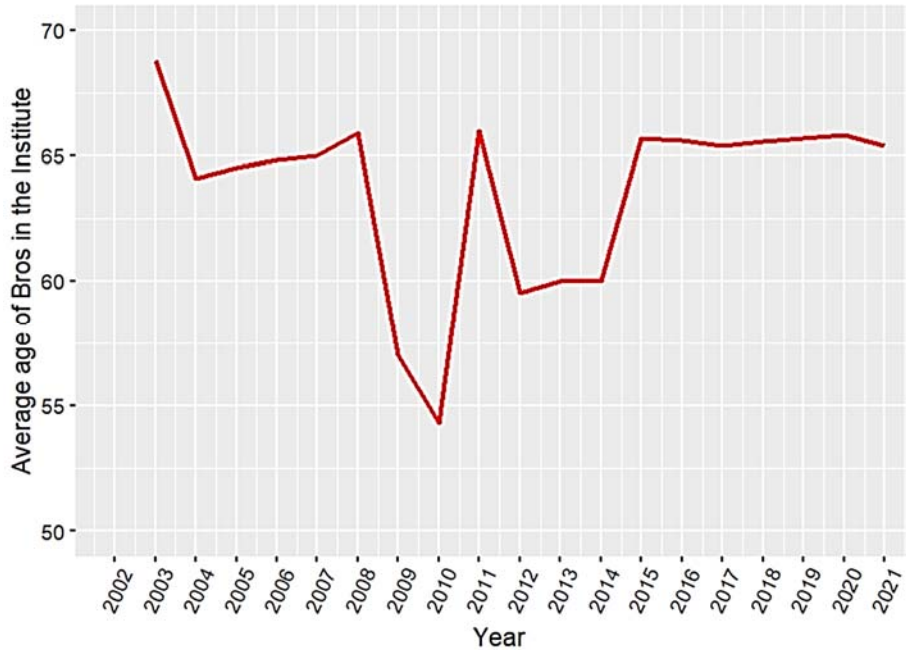


Figure 2: Evolution of the average age of Brothers in recent years

The average age was high in 2003 at almost 69 years; and it has dropped a lot to about 54 years in 2010. It is being maintained at a constant since 2015 to almost 66 years. Clearly, the Brothers are aging.

### 3. Evolution of the number of educational works over the years from 2002



Figure 3: Evolution of the number of educational works in recent years

There are missing values in recording the number of educational works every year. The curve shows that we are opening more schools in recent years. The shift has been from at least 980 schools in 2016 to more than 1,120 schools in 2021.

#### 4. Evolution of the number of Brothers communities over the years from 2002

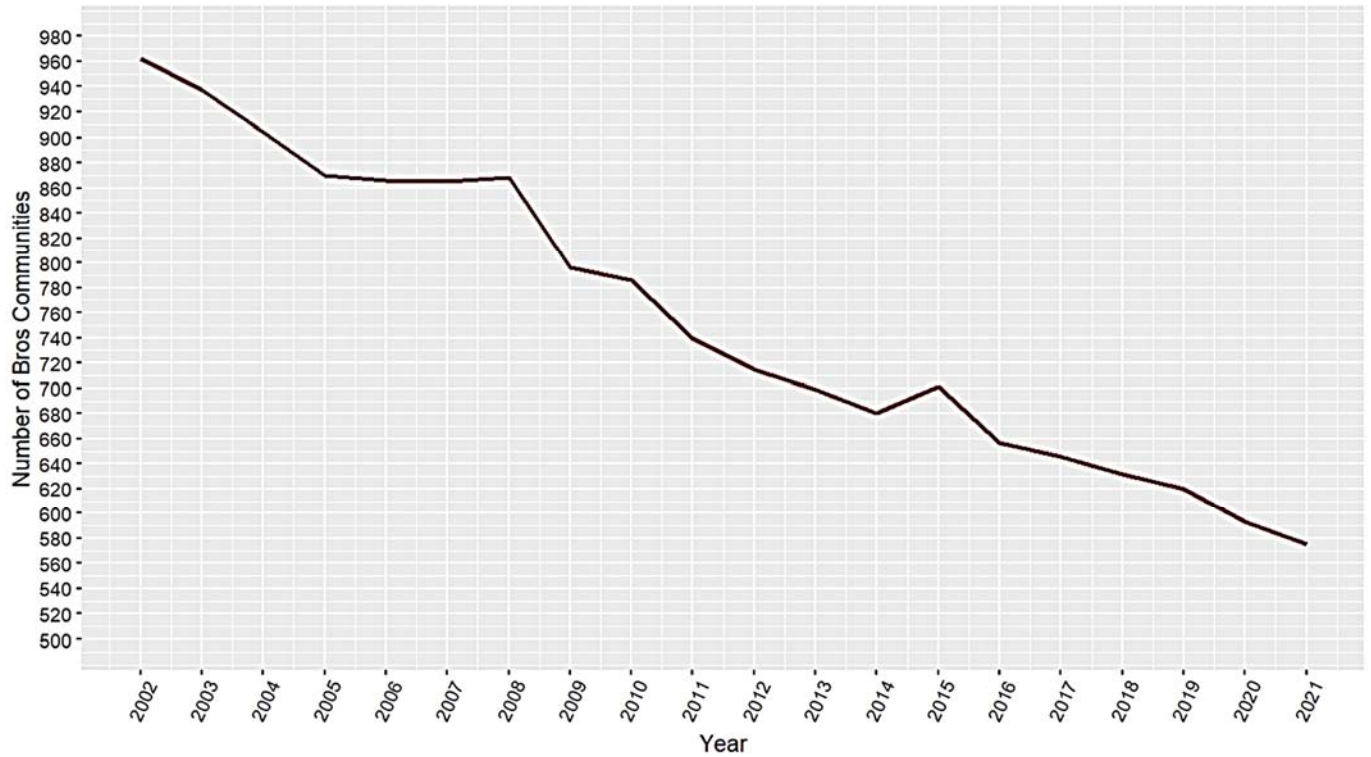


Figure 4: Evolution of the number of communities in recent years

The number of communities is decreasing over the years. The decrease has been from 960 communities in 2002 to less than 580 communities in 2021.

### 5. Evolution of the number of students over the years from 2002

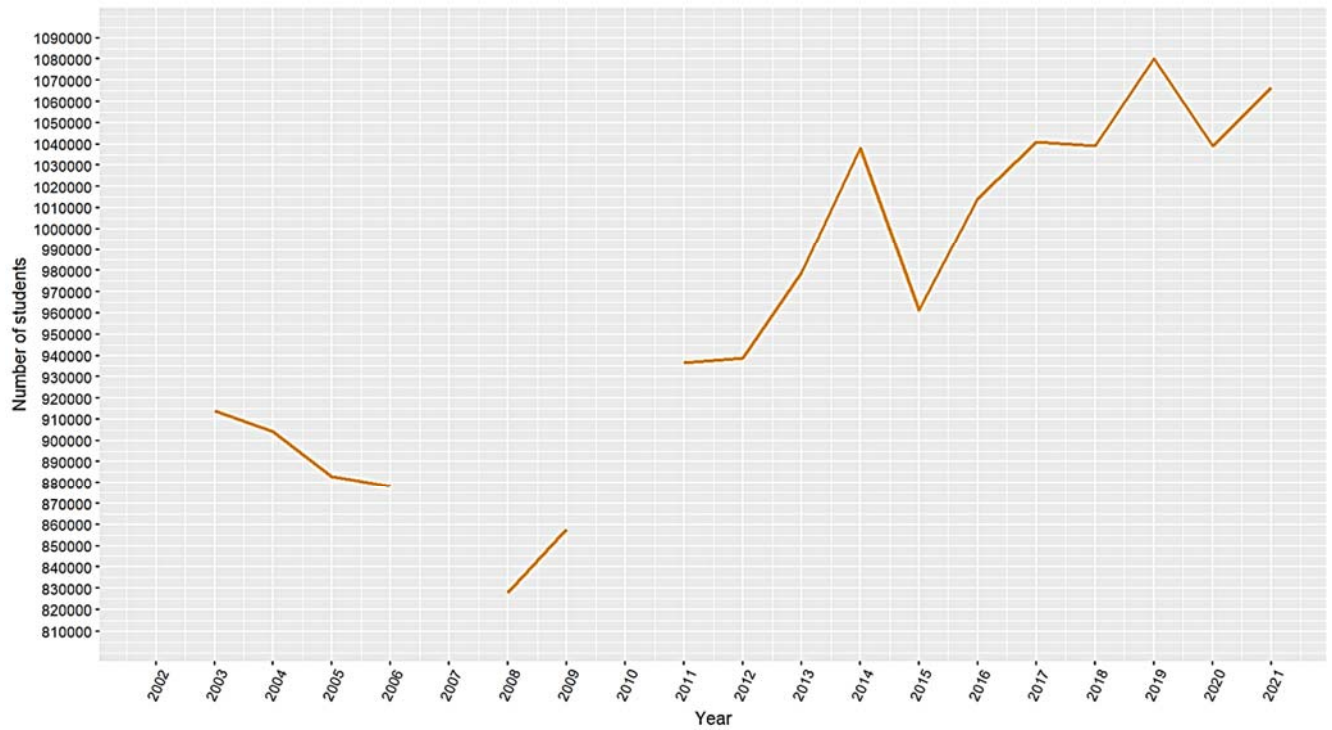


Figure 5: Evolution of the number of students in recent years

From 2011 to 2021, i.e., the last 10 years, the number of students has increased from about 935,000 in 2011 to 1,065,000 in 2021.

### 6. Deceased Brothers over the years from 2002

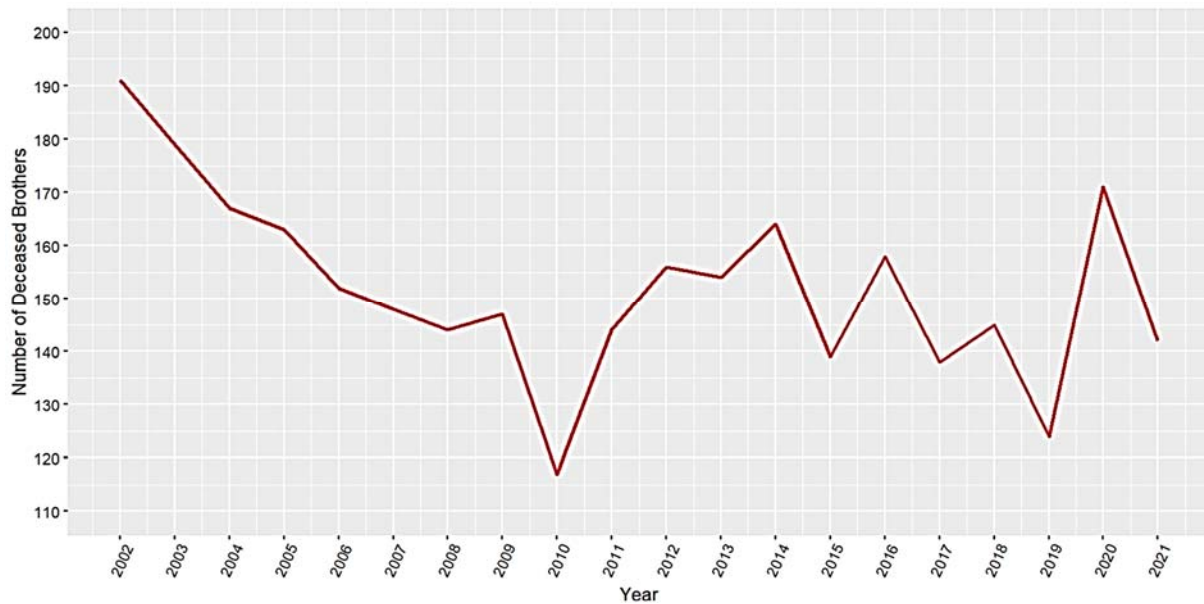


Figure 6: Evolution of the number of deceased Brothers in recent years

It is clear that from more than 190 in 2002, the number of deceased Brothers is decreasing in recent years.

### 7. *Hope of the Institute over the years from 2002*

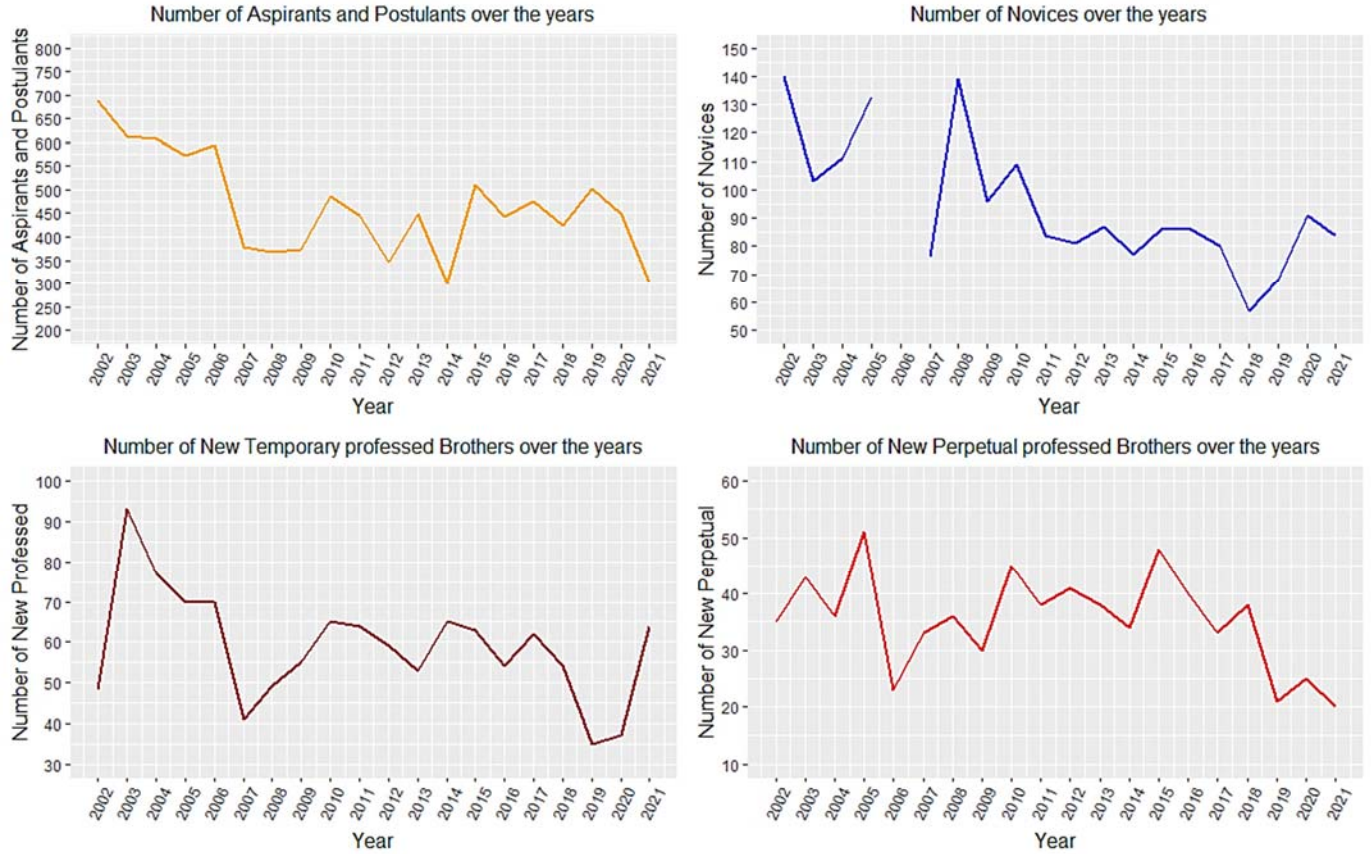


Figure 7: *Evolution of exploratory variables depicting hopes for the Institute in recent years*

We note that there are some missing values for the number of novices. Besides, there is a clear drop in the number of aspirants and postulants, and in the number of novices.

The numbers of newly professed and finally professed do not show a clear trend even though there is a drop from 2002 to 2007.

### 8. Perseverance of Brothers over the years from 2002

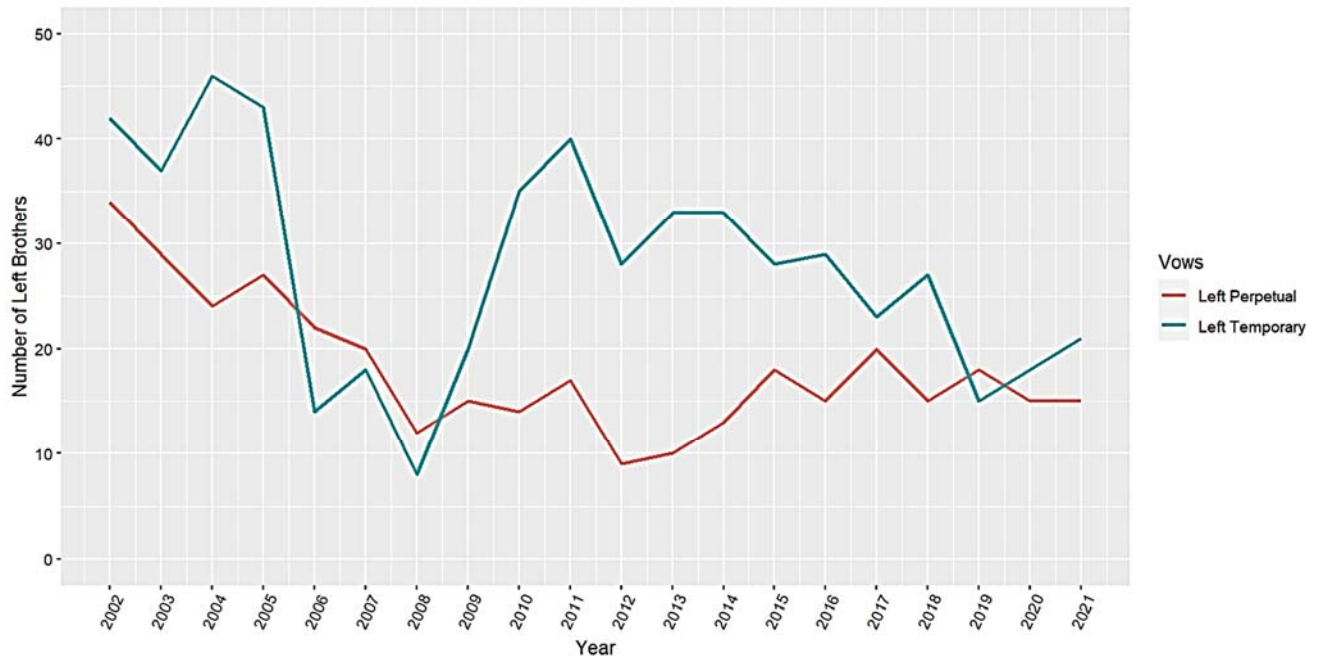


Figure 8: Perseverance of Brothers in recent years

There was a drop from 2002 to 2008 of the number of Brothers both in temporary and perpetual vows. The number of Brothers in temporary vows leaving has increased from 2008 to 2011, but it is dropping slowly until 2021.

### 9. Comparing Perpetual and Temporary Vows over the years from 2002

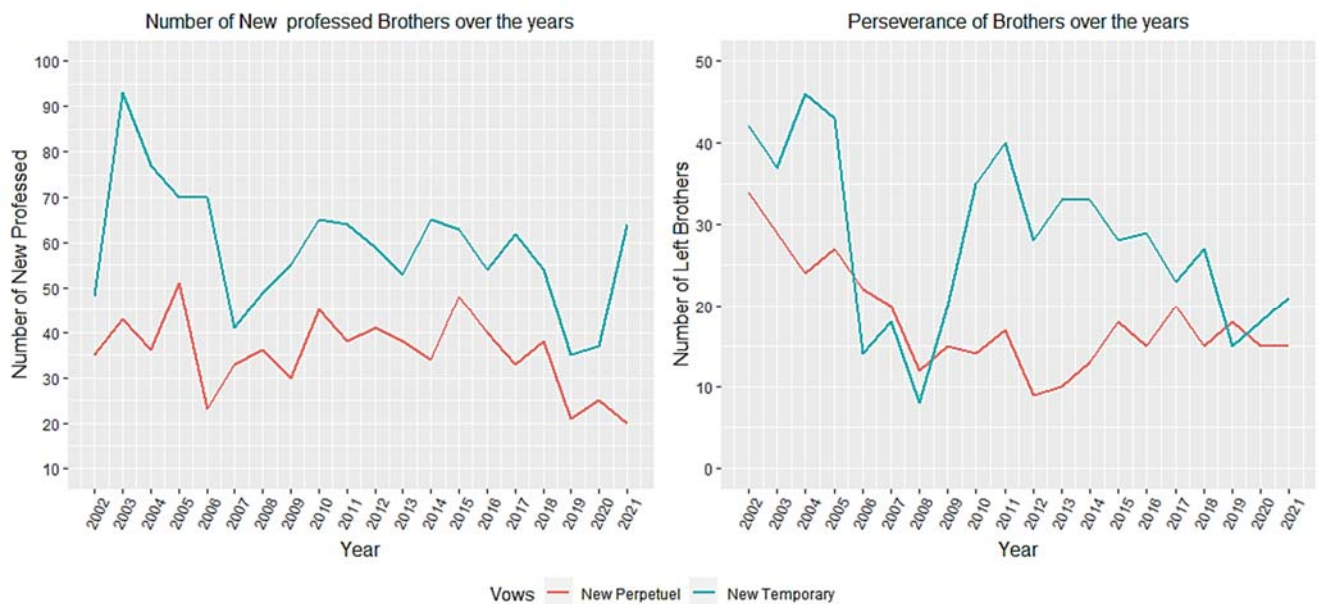




Figure 9: Comparison of newly versus finally professed Brothers in recent years

On the plot, we note that there are fewer temporary professed compared to new finally professed Brothers. However, more temporarily professed Brothers are leaving compared to perpetually professed Brothers.

**10. Comparing perpetual and temporary vows groups over the years from 2002**

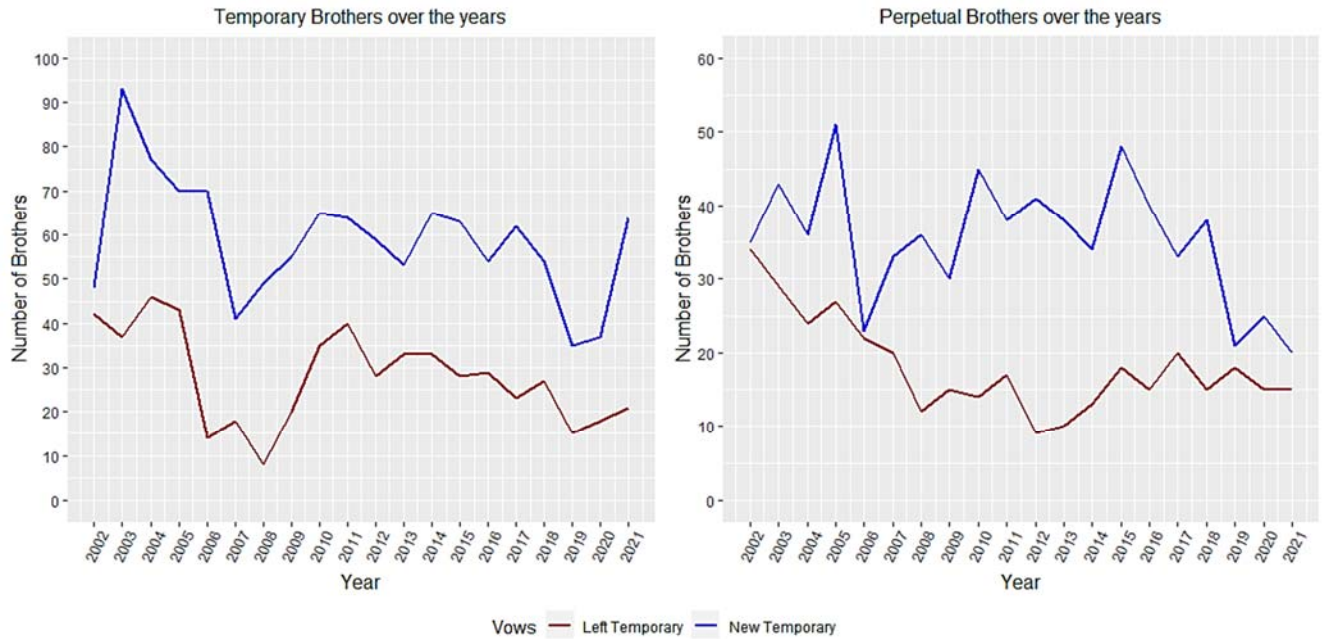


Figure 10: Comparison of newly versus finally professed Brother groups in recent years

The plot shows that there is hope as there are more newly professed than the number of Brothers leaving the Institute.

## 11. Trends of hope over the years from 2002

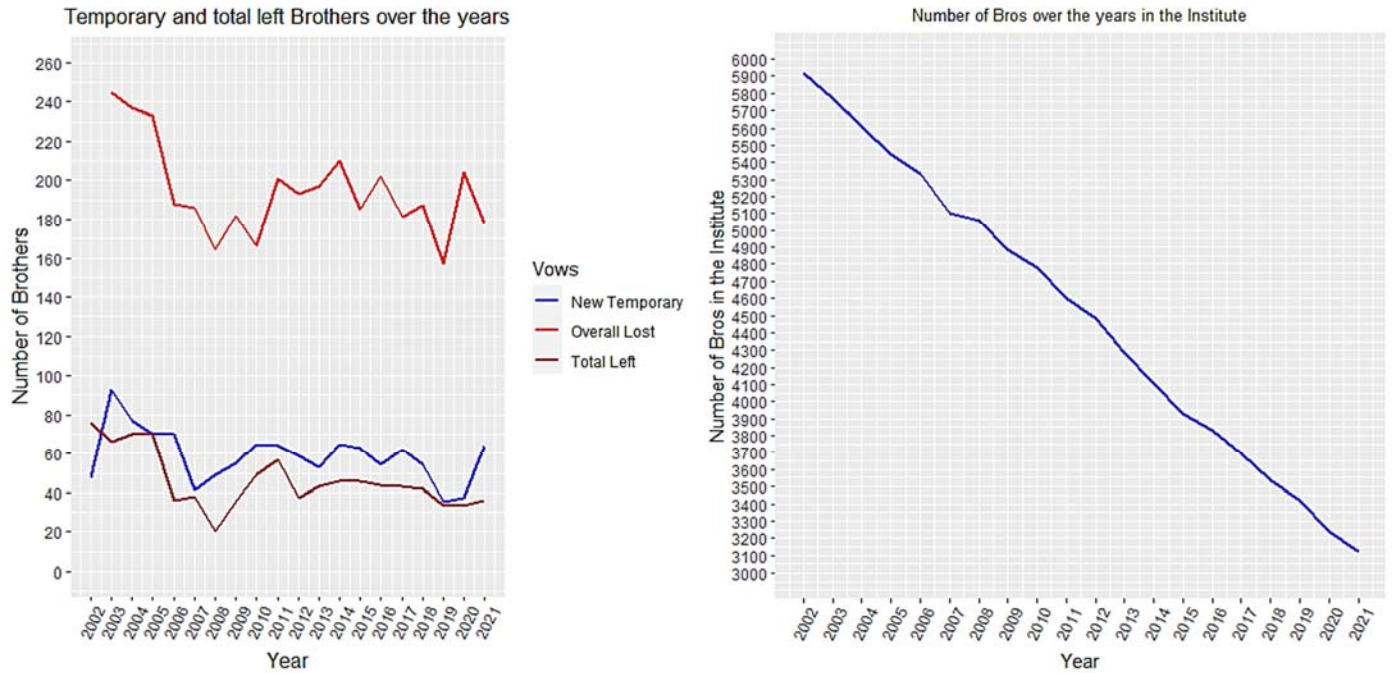


Figure 11: Trends of hope on the numbers in recent years

The entries into the Institute are more than the total number of Brothers leaving the Institute. The number of Brothers is decreasing over the years due to the overall loss (red curve) in Brothers, including the few leavings and the deceased Brothers.

For instance, in 2021, we welcomed 64 Brothers while we lost 178 Brothers.

## 12. Brothers and collaborators in the mission over the years from 2002

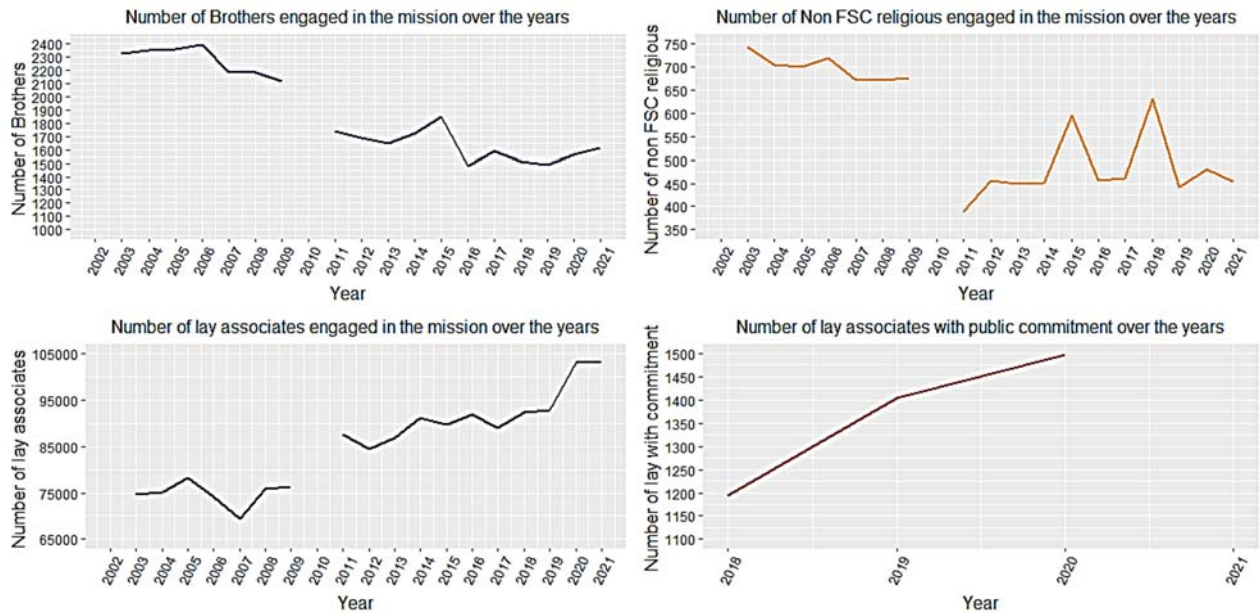


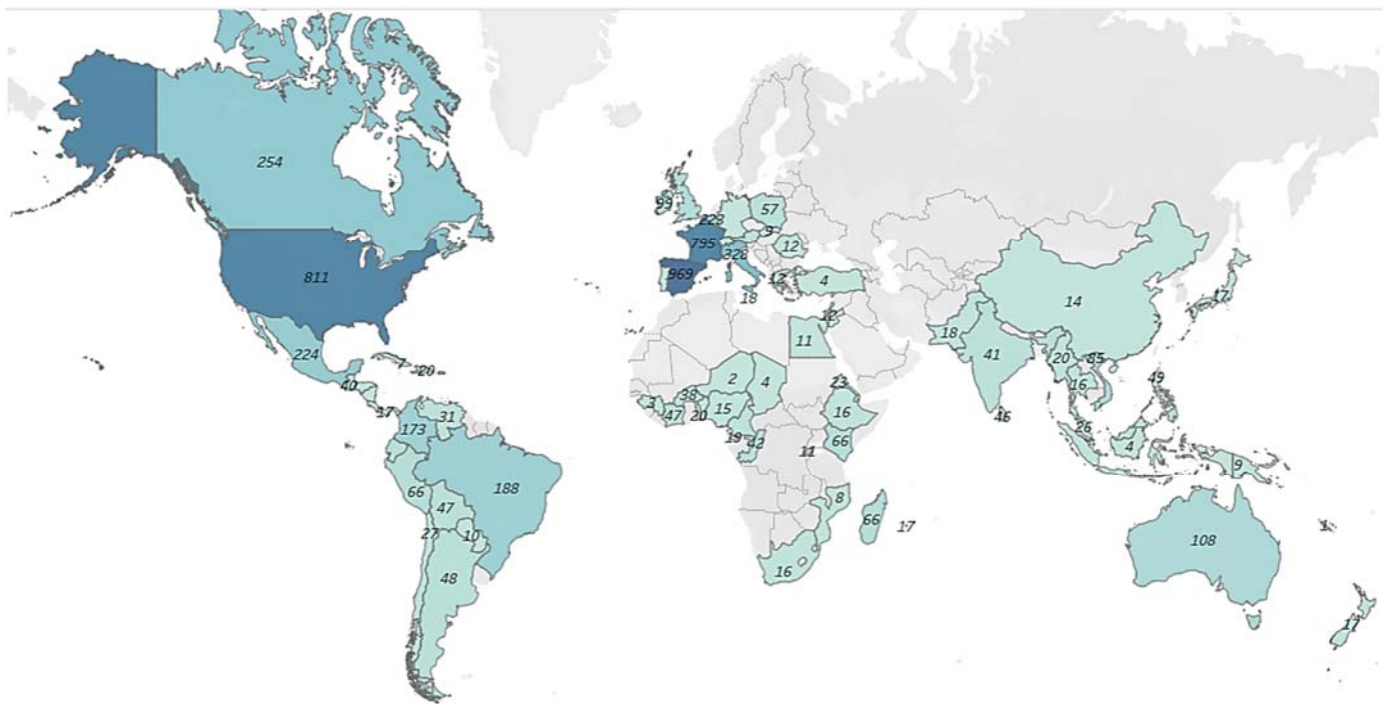
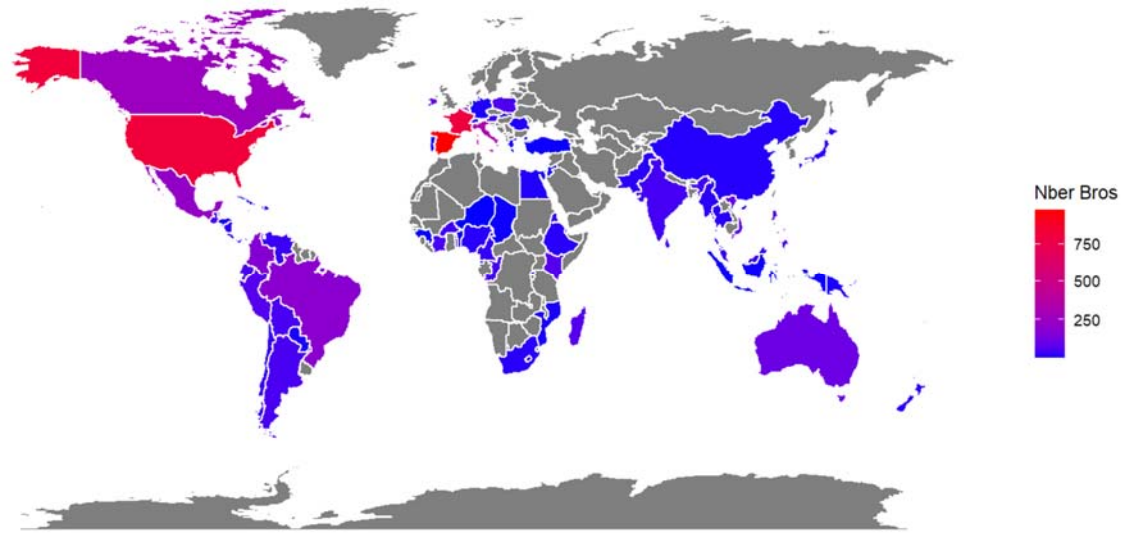
Figure 12: Numbers of Brothers and collaborators in recent years

Based on the available data, the number of Brothers engaged in the mission is decreasing while the number of lay associates and those with public commitment is increasing over the years. There is no clear trend regarding the number of non-FSC Religious working in our educational institutions.

## 13. Number of Brothers in the world map over recent years

Each map will be given in two ways. The R version with the legend helps to identify countries with the highest numbers of Brothers. We use Tableau to get a different map with the numbers as labels.

13.1. Number of Brothers in the world in 2003

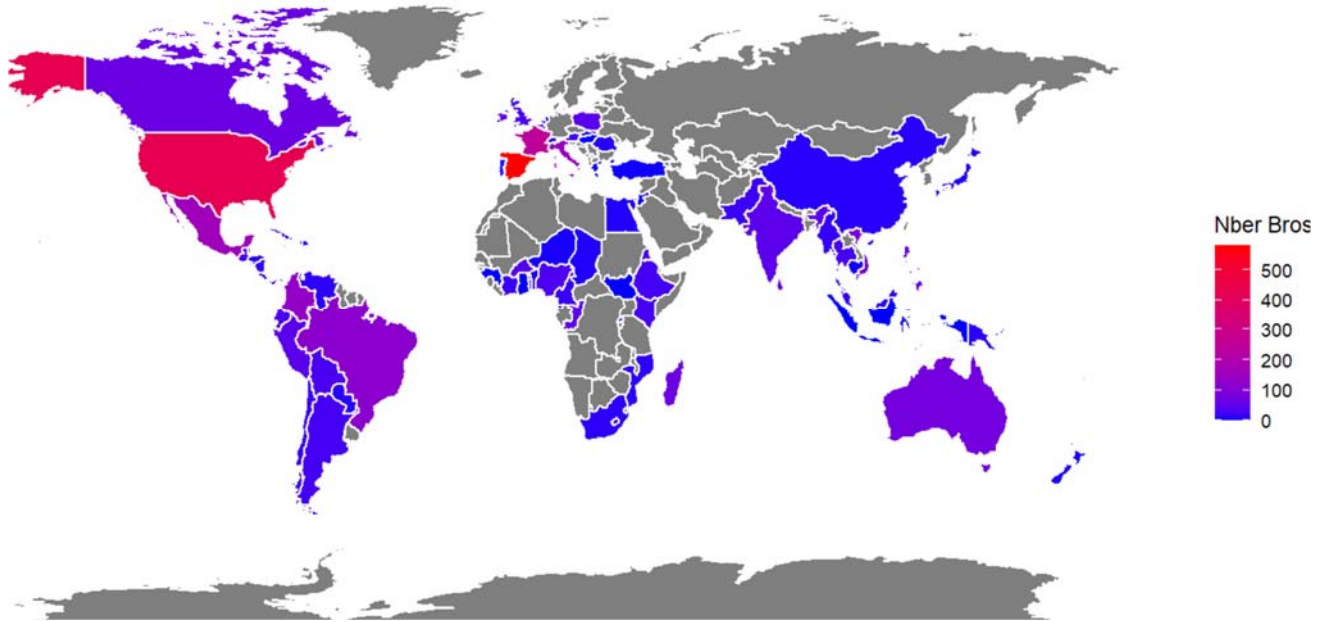


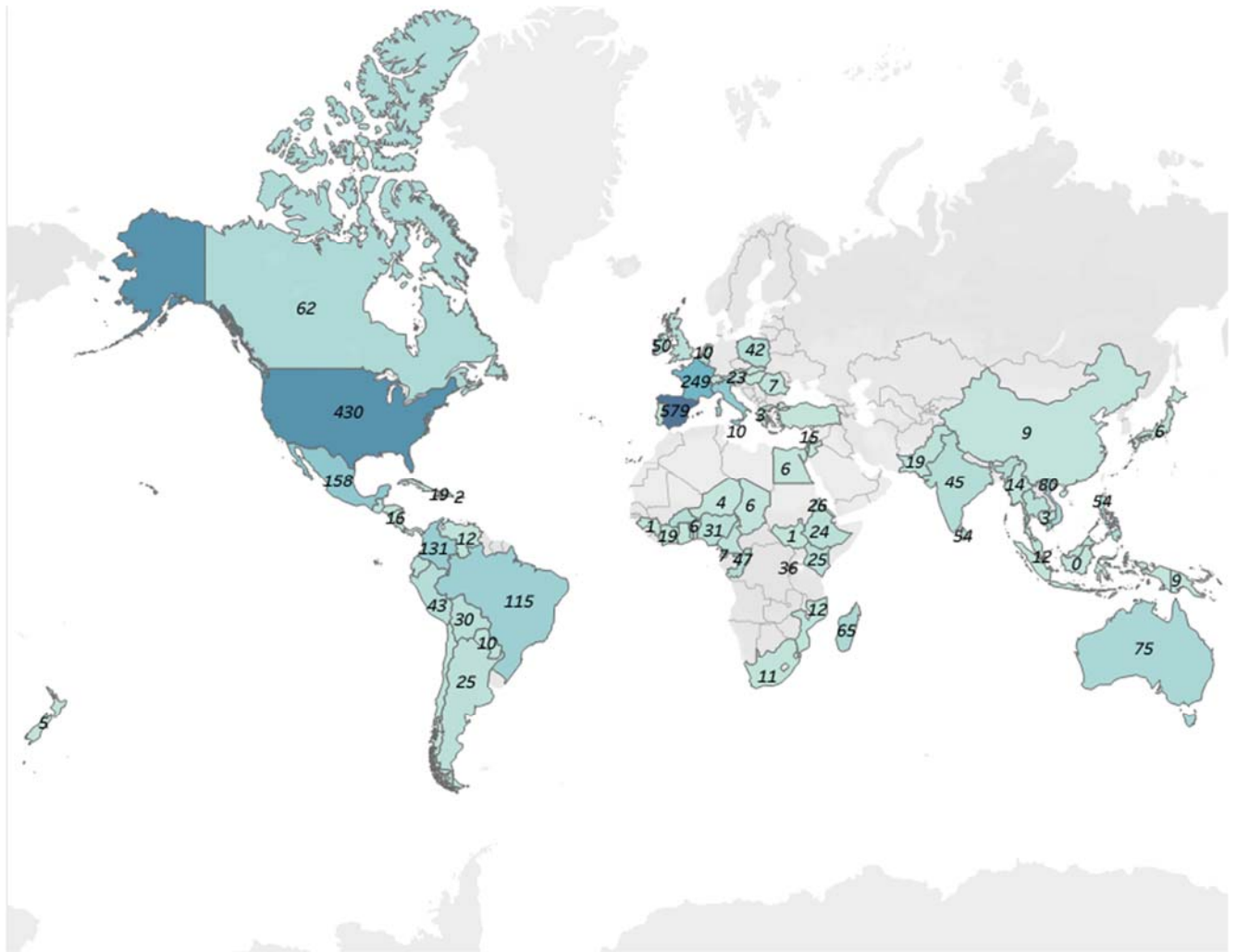
In 2003, USA, Spain and France had respectively the biggest numbers of Brothers. Brazil, Mexico, Italy, and Australia also have an important number of Brothers.



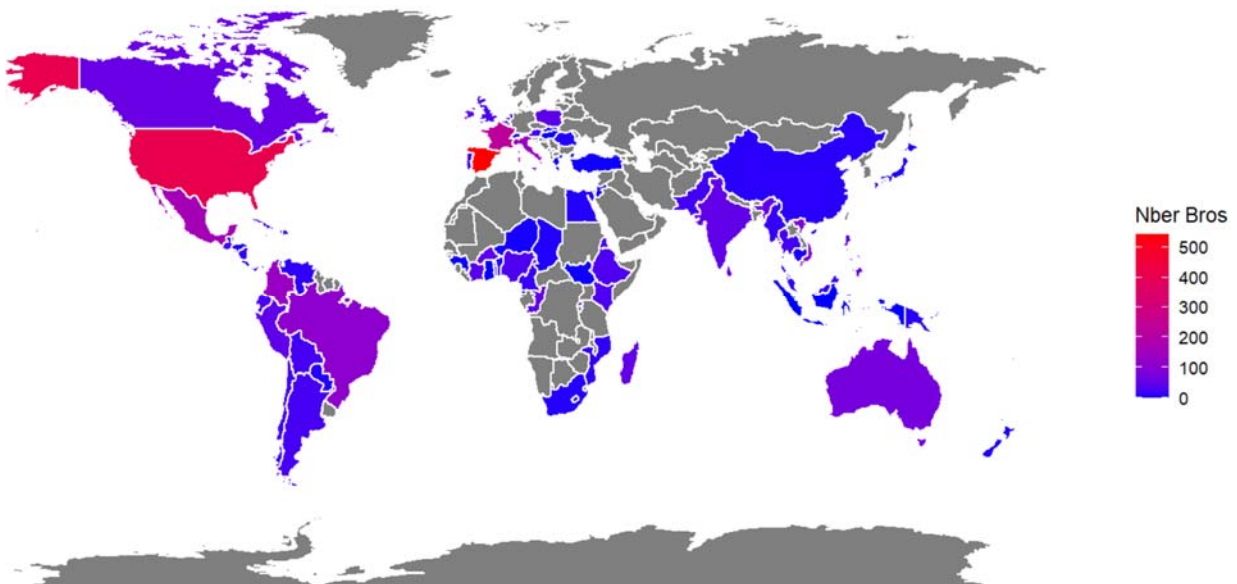


13.4. *Number of Brothers in the world in 2020*

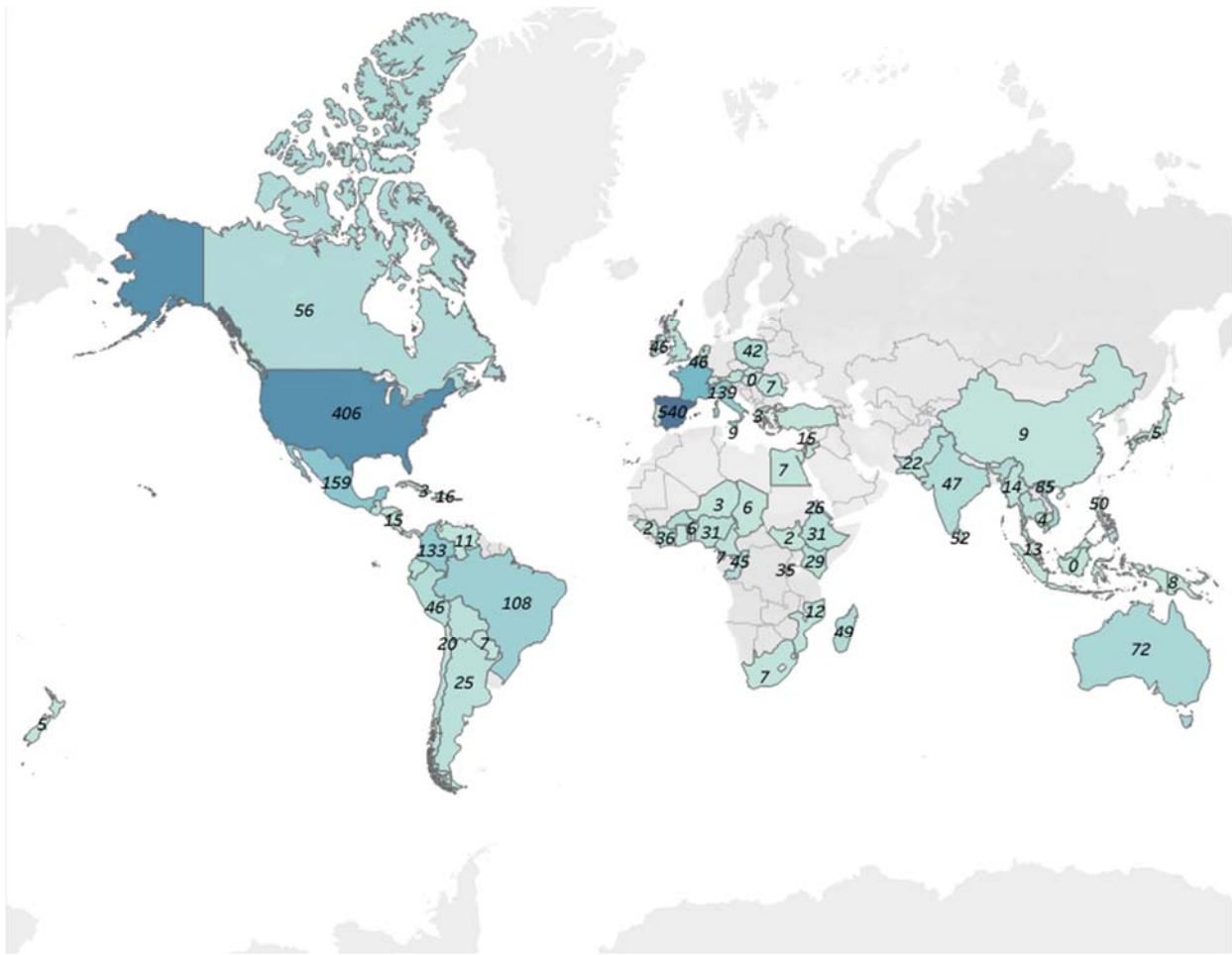




13.5. *Number of Brothers in the world in 2021*







In 2021, Spain and USA seem to be having important numbers of Brothers beyond 500 and at least 400 respectively. France, Italy, Mexico, and Columbia, among other countries, also have large numbers of Brothers.

In general, there is an effort to record data entries related to Brothers and their mission in the world over the years. The yearly mapping of the number of Brothers in every part of the world helps to show the spread of the mission around the world. The number of Brothers is decreasing over the years in the world. There is hope as the number of entries into the Institute surpasses the number of Brothers leaving. Besides, the increasing number of lay associates over the years has augmented the ever-decreasing number of Brothers engaged in the mission in educational works.

The training of formators and the accompaniment of Brothers both in temporary and perpetual vows are key priorities to be considered for the survival of the Brother’s vocation.

### Conclusion

Although the data presented and explored in this presentation – primarily a mathematician’s “visual essay” in charts and images – may be somewhat disconcerting, the Institute of the Brothers

of the Christian Schools has, by the grace of God and the courage of our forebears, a history of moving back from the precipice and forward into the future on behalf of the educational service of humanity.

Between 1688 and 1691, what was already only a small group of Brothers was reduced to almost nothing. The seminary for schoolmasters was closed; no new candidates to the Brothers were arriving; and only a handful of Brothers remained. Yet, the heroic response in solidarity and commitment of John Baptist de La Salle, Nicolas Vuyart, and Gabriel Drolin to God on behalf of the poor assured the work.<sup>10</sup>

At the time of the French Revolution, the Institute of about 1,000 Brothers in France was suppressed; and between 1792 and 1804, it nearly disappeared. Some Brothers were imprisoned (including Superior General Brother Agathon), others were martyred (including Brothers Solomon, Léon, Roger, and Uldaric), and a bare remnant of some 16 remained in Italy. However, daring and undaunted the Brothers who had dispersed began to regroup in Lyon; and the Institute experienced a new spring of growth and renewed vitality.<sup>11</sup>

There were almost 11,000 Brothers in 1,500 educational establishments around France at the time of the canonization of the Founder in 1900; and yet the secularization laws of 1901 and 1904 threatened, once again, the destruction of the Institute. In a very short period of time, some 4,000 Brothers were secularized and moved out on their own in an effort to keep the educational work alive; another 4,000 chose to go in exodus from France to other parts of the world rather than secularize; and another 3,000 withdrew or just disappeared. Great sacrifice was required; bold decisions had to be made; and a *de facto* internationalization of the Institute was the result.<sup>12</sup>

So while the data presented in this report is sobering, there remains, as previously stated, cause for hope. The number of those becoming Brothers today surpasses the numbers leaving. An increasing number of good and worthy lay associates stand side-by-side with the Brothers in the educational mission. However, the data is clear. The promotion of the vocation of the Brother and the formation and accompaniment of Brothers demands bold action and renewed attention if there is still to be in the years to come a mission shared by Lasallian Partners and Brothers working together.

## Endnotes

1. Brother Abel Sekone, who is a De La Salle Christian Brother from Burkina Faso in West Africa, did his undergraduate studies in Nairobi at Christ the Teacher Institute of Education of Saint Mary's University of Minnesota. He recently completed an MS in applied mathematics/ data analytics at Manhattan College in New York City.

2. Cf. *Dogmatic Constitution on the Church: Lumen Gentium* (Vatican City, 1964), #11: "Strengthened by so many and such great means of salvation, all of the faithful, whatever their condition or state, are called by the Lord – each in his or her own way – to that perfect holiness by which the Father himself is perfect."

3. *The Brother of the Christian Schools in the World Today: A Declaration* (Rome: Brothers of the Christian Schools, 1967).

4. Cf. *The Life and Death of Religious Orders: A Psycho-Sociological Approach (Vie et Mort des Ordres Religieux)* by Raymond Hostie SJ (Washington, DC: Center for Applied Research in the Apostolate, 1983).

5. Cf. *The Life and Death of Religious Orders: A Psycho-Sociological Approach*, page 274.

6. *Shaping the Coming Age of Religious Life* by Lawrence Cada CM, Raymond Fitz CM, Gertrude Foley SC, Thomas Gioardino SM, and Carol Lichtenberg SNDdeN (New York: Seabury Press, 1979).

7. “Brothers of the Christian Schools: Will We Live or Will We Die?” by Martin Helldorfer FSC in *A Time to Live*, edited by Timothy McCarthy FSC (Romeville, IL: Christian Brothers Conference, 1981), page 16.

8. For example, see *God’s Witnesses in the Heart of the World* by Leonardo Boff OSF and translated by Robert Fath (Claretian Publications, 1981) and *New Wine-Skins: Re-Imagining Religious Life Today* by Sandra Schnieders, IHM (Paulist Press, 1986).

9. Cf. *Post-Synodal Exhortation: Vita Consecrata* by Pope John Paul II (Vatican City, 1996).

10. Cf. *The Life of John Baptist de La Salle: Book Two* by Jean-Baptiste Blain, translated by Richard Arnandez FSC, and edited by Luke Salm FSC (Landover, MD: Lasallian Publications, 2000), pages 287-291.

11. Cf. *History of the Institute of the Brothers of the Christian Schools in the Eighteenth Century: 1719-1798* by William J. Battersby FSC (London: Waldegrave Publishers, 1960), pages 100-144; *History of the Institute of the Brothers of the Christian Schools in the Nineteenth Century: 1800-1850* by William J. Battersby FSC (London: Waldegrave Publishers, 1961), pages 17-33; and *Lasallian Studies #6: An Introduction to the History of the Institute of the Brothers of the Christian Schools, The Eighteenth Century 1726-1804* by Henri Bedel FSC and translated by Allen Geppert FSC (Rome: Brothers of the Christian Schools, 1998), pages 186-273.

12. Cf. *Lasallian Studies #1: A Teaching Brotherhood Finds Its Identity, The “Secularization” Period of 1904-1920* by Georges Rigault and translated by Gerard Rummery FSC (Lulu Publishing Services, 2017); and *Lasallian Studies #11: An Introduction to the History of the Institute of the Brothers of the Christian Schools, 19<sup>th</sup>-20<sup>th</sup> Century (1875-1928)* by Henri Bedel FSC and translated by Allen Geppert FSC (Rome: Brothers of the Christian Schools, 2008), pages 151-206.